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BY

ALLAN NEVINS

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PREFACE

THE fact that this volume constitutes the first history of the University of Illinois ever written has largely determined its character and scope. It seemed necessary to the writer to throw a much greater emphasis upon the record of the past than upon the tendencies or characteristics of the present. Even in the four final chapters, nominally not historical at all, will be found much historical matter. The detailed steps in the development of the institution are known to so few of the graduates or faculty, not to speak of outsiders, that a comprehensive account of them is the first requisite of any introduction to the inner spirit of the rapidly-growing University. Moreover, these are years in which the institution is rapidly losing the men who as teachers and students have personal recollection of its first years, and it seemed a duty to attempt, while it was still possible, to interweave with facts from written sources those which come authentically from unwritten. Of the shortcomings of the book the writer is aware. It is an unfortunate fact that till a short time ago the University, with the carelessness of youth, made no attempt to preserve historical materials relating to itself. There are many phases of its record upon which it has been hard to accumulate information. Upon some of the most important questions the oral testimony has been found to be conflicting, while upon others some detailed oral testimony available has been shown so unreliable that it has had to be thrown aside in favor

of shorter but more accurate information. The writer has had to work nearly a thousand miles from the University, and to depend upon the courtesy of correspondents for much that one on the spot would easily have obtained. But it is to be hoped that the volume will inspire further labor in the same field. To a number of friends who have offered assistance, and especially to President James, Deans Clark, Greene, Kinley, and Davenport, Mr. George Huff, Mr. P. L. Windsor, Drs. Powell and Phelps, Professors Forbes, Talbot, Rolfe, Ricker, Alvord, Zeitlin, White, and Scott, to three former Trustees, Judge Cunningham, Mr. S. A. Bullard, and Mr. F. M. McKay, to a number of graduates, as Mr. H. M. Dunlap, Mr. C. A. Kiler, and Mr. W. A. Heath, and to the editor of this series, the author wishes to acknowledge his indebtedness. Professors Baker and Stoek have, with many of those named above, read parts of the proofs; Dr. Phelps has furnished much material for the appendices, and Assistant Dean Warnock, Mr. H. H. Horner, Miss L. O. White, and Mr. Lewis Omer have transmitted other material. The author has not, partly in deference to practice in other volumes in the series, partly from his sense of the needlessness of it, burdened his pages with many footnote references to sources. In many instances the text itself indicates that the source lies in the reports of the Board of Trustees, the University catalogues, or the reports to the State Superintendent of Public Instruction. The files of the *Alumni Quarterly,* of the *Illini* and other student publications, those of Twin City and Chicago newspapers, and the Journals of the Legislature, have also been drawn upon. It would usually be undesirable to indicate oral sources of material.

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The rise of these great universities is the most epoch-making feature of our American civilization, and they are to become more and more the leaders and makers of our civilization. They are of the people. When a State university has gained solid ground, it means that the people of a whole State have turned their faces toward the light.

President H. S. Pritchett on the State University.

I

TURNER AND THE FOUNDING OF THE UNIVERSITY

Belated Nature of the Movement for a State University in Illinois. Mismanagement of the State's Educational Funds. Jonathan Baldwin Turner and the Movement for Industrial Education. The Granville and Other Conventions. Lincoln and the Passage of the Morrill Act. Struggle over the Location of the University. C. R. Griggs and the Choice of Urbana.

THE University of Illinois, as a State University, is in large degree representative of the social character, the work, the culture, and the ambitions of the State. But it must be understood that as a representative of the commonwealth, believed in and supported by it, its history is short, dating only from about 1890. The general record of the University falls into four distinct parts. Through the efforts of Jonathan B. Turner and others in the fifties and sixties, it was brought into being in 1867 as an embodiment of the movement for industrial and agricultural education. Under its first two heads, John Milton Gregory and S. H. Peabody, it somehow found its feet and maintained its place against financial difficulties, legislative neglect, the hostility of some interests and the contempt of others, but without achieving real character as a University. About 1890 it began to receive stronger State support, to attract a larger registration, and to widen its scope, the energy and administrative ability of Andrew Sloan Draper carrying it steadily forward from 1894 until a decade

later. Under President Edmund J. James since then the ground won has been consolidated, new growth achieved, something approaching symmetry given an unshapely aggregation of colleges and schools, and the spirit of a real center of learning infused into it.

The fact that the University was not incorporated until 1867 speaks plainly the want of interest in public higher education that was to handicap its growth for so many years. Illinois was the last State of the Northwest Territory, and one of the last in the Middle West, to found a State University.

Virtually all of the public collegiate education west of the Alleghenies traces its origin to the Ordinance of 1787, the inspiration of which should have been as effective in Illinois as in other States. The Ordinance provided that "religion, morality, and knowledge being necessary to good government and the happiness of mankind," throughout the Territory "schools and the means of education shall forever be encouraged"; and one of the ways in which Congress translated this generality into concrete terms was by placing in the deed for the tract sold to the Ohio Company a stipulation that two townships should be reserved for the support of "a literary institution, to be applied for the intended purpose by the Legislature of the State." This step set so powerful a precedent that after the year 1800 each State admitted into the Union, with the exceptions of Maine, Texas, and West Virginia, received two or more townships for a University. By the close of 1802 the American Western University, later Ohio University, had been chartered and located at Athens, Ohio. In 1820 the Legislature of Indiana founded Indiana Seminary, later Indiana University, at Bloomington. Michigan's Territorial Legislature established

in 1817 the Catholepestemiad, or University of Michigania, which in 1821 was rechristened the University of Michigan—though it was not till 1837 that the University as we know it was founded. Even the immature neighbors of Illinois took precedence of her. The University of Missouri was established in 1839, that of Iowa and that of Wisconsin before 1850; while in 1851 Minnesota petitioned Congress for land to endow a University at the Falls of St. Anthony. In Illinois it required the union of a powerful new movement with the old impulse expressed in the Congressional grant of "college townships" to bring the University into being.

Yet since her admission in 1818 Illinois had had even greater opportunities than most of her sister commonwealths to found a State institution of higher learning. The Federal Government had given her not only the customary two townships but one-half per cent. of all the proceeds of the sale of Government lands in Illinois after 1818, with the special stipulation that this was to be "exclusively bestowed upon a college or university." Ordinarily Congress gave five per cent. of such proceeds for road-building, but in the case of Illinois it was thought best to divide this percentage among the roads, the common schools, and the University. The Government was generous, too, in its arrangements for the location of the two townships. The first, granted in 1804, was found to be marshy, and permission was later given to relocate it in detached tracts of small area, to insure the selection of good land. The second, granted in 1818, was to be located in the same manner. A progressive and public-minded legislature might early have founded a University in Illinois; instead, the Legislature was consistently perverse and at times dishonest.

Though abuse of the Federal funds for higher education was common, no fund in the Northwest was so abused as that of Illinois. Other States sold their townships at low prices, and some hurried their sales in order to afford an immediate income to the State College or University. Illinois alone sacrificed her lands thirty years before the State institution was created, and then systematically made away with the proceeds. Other States, after using the Federal funds to establish a State University, failed to appropriate a dollar for its support for decades. Illinois alone antagonized the interests of higher education by using for other purposes even the moneys that Congress had said were to be "exclusively bestowed" upon the University.

In this course the State was prompted by financial troubles caused by grave reverses immediately following its admission. The State Bank established in 1821, after a briefly disastrous course, and after issuing a flood of paper money, had failed. In one decade, at a period when $30,000 was the normal annual expense of government, the State lost $400,000, while a heavy burden of debt was thrown directly on the people. By 1830 taxation had become so unpopular that the Legislature knew that any increases in it would meet with quick and angry opposition; and thus for reasons primarily political the party in power turned, among other expedients, to the misappropriation of the lands and money for higher education.

In the method of this misappropriation the politicians were both blundering and cunning. By laws of 1829 and 1831 the two Congressional townships were authorized to be sold at auction, each at one time and place, for a minimum price of $1.25 an acre; and if not

fully disposed of at the advertised auctions, the remaining land could be purchased at any time thereafter at this minimum figure. Naturally, there was no demand for so much as thirty-six square miles at once, and all but three sections remained to be purchased after the auctions—at $1.25 an acre. It was inexcusable to fix as the price for these picked farming lands the lowest rate at which any public lands could then be bought in America. As for the cunning, the laws authorizing the sales of the townships contained a clause appointing four State Commissioners to take charge of the proceeds[1] and invest them in "stocks and funds." To these proceeds were added the "college fund," as the accumulations from the half per cent. of the sales of Government lands, granted the State for a University, were called; and by a separate act the Governor was authorized to borrow the whole, at six per cent. annually, the interest to be added to the principal until the funds were needed for the founding of the University. Thus was devised a method of borrowing money without any immediate payment of interest. It is easy to see why the Legislature, for six years at this period of acute financial embarrassment, was loath to disturb the

[1] To distinguish it from the "college fund," the money obtained from the sale of the two townships was called the "seminary fund." Representative Nathaniel Pope, the Congressman responsible for the inclusion within Illinois of the present northern part of the State, was responsible also for the commutation of part of the ordinary grant for roads and canals to one for schools and a college. See Frank W. Blackmar's "History of Federal and State Aid to Higher Education in the United States," Chapters II and VI; "Early Education in Illinois," by W. L. Pillsbury, in Public School Report, 1885-86, p. civ; "Historical Sketches of the State Normal University and the University of Illinois," by the same author, Public School Report, 1887-88, pp. lxxvii and cxvii; and for the later pages see also "Historical Sketch of McKendree College," by M. H. Chamberlin in Publication No. 9 of the Illinois State Historical Library, p. 328.

arrangement and bring down the whole obligation, with its regularly mounting increment, upon the people, and ready to frown upon the slightest movement towards a University.

In 1835 it was provided that the annual interest, instead of being added to the principal, should be "loaned" to the school fund for distribution among the counties; and here was a renewed barrier to the establishment of a University. The counties knew well that there was little probability that this "loan" would ever be repaid. They were getting six per cent. yearly of the funds, and they needed it, for the lands set aside for the common schools had been wastefully administered by the State. Thus prejudiced against a State institution, indeed, it was not until just before the Civil War that they relinquished their grasp on this income. In 1857 the Legislature consented to the establishment of a Normal University at Bloomington, and thereafter practically all the interest on the funds was appropriated to it. The "college fund" amounted to about $120,000; the sum from the sale of the townships to about $60,000. The interest for the twenty-two years on the latter amount was never repaid, but part of that on the former was devoted to the erection of the Normal University buildings, and the remainder added to the principal in 1882, another Normal School having meanwhile come to share in the income from the fund. None of the money has ever gone to the University of Illinois.

During the period from 1830 to 1850 only scattering and futile attempts were made to recover for a University this double fund, and the impression gained ground that a final dissipation of it was not only legitimate but advisable. In 1833 a bill was offered locating

at Springfield an institution for the education of youths "in the English, learned, and foreign languages, the useful sciences and literature," a board of ten Trustees being named in the bill. But besides the consideration just named, a number of jealousies conspired to defeat it. Springfield was then an aspirant for the location of the State House, and Vandalia, scenting in the measure an advantage for her rival, was at once roused to opposition. Three sectarian colleges, McKendree, founded by the Methodists; Shurtleff, by the Baptists; and Knox, by the Presbyterians, were just then struggling into being, not yet having been incorporated, and their friends regarded with alarm any plan for a State-aided University. The bill was first preposterously amended to establish four colleges, to be called Washington, La-Fayette, Franklin, and Jefferson, and then killed. Next year Gov. Joseph Duncan again recommended the establishment of a State University, but was disregarded. There is evidence that a few men, inspired by the example of other States, hoped for a single strong institution, but their ideas never took root.

Instead, the most marked impression was made by those who held that the funds should be used for bettering normal and secondary education, while the heads of sectarian colleges gained wide support for their selfish determination that if the money were used for higher instruction it should be divided among them. In 1834 an educational convention urged the use of the funds in establishing "county seminaries . . . in which those who, unable to obtain a collegiate education, ambitious of more than primary instruction, could attain an enviable height in literary and scientific attainments." During the next two years two successive measures to this general end, both stating that such provision was needed

to insure "means for the qualification of teachers for the common schools," failed. But in 1840 the movement for normal school education received a great impetus through John S. Wright, founder in Chicago of the *Union Agriculturist,* who borrowed from the East the arguments which Charles Brooks and Horace Mann were then employing. He urged upon the Legislature the establishment at Springfield of a Normal School and Teachers' Seminary with the college and seminary funds, and in 1846 the Senate instructed the committee on education to inquire into the matter. Three years later the State Education Society indorsed the project, and in 1851 the State Superintendent advocated it. Finally, in the latter year a bill was introduced combining in one anomalous measure the ambitions of the normal school men and the sectarian colleges, for it proposed to organize from the Governor, Secretary of State, and college presidents a board of "Regents of the University of the State of Illinois," which should distribute the fund among colleges complying with certain conditions as to equipment and endowment, and maintaining a professorship of normal education, and which should grant degrees. It passed the Senate, but failed in the House. The advocates of the use of the funds for normal schools went on, as we have seen, to ultimate triumph, while the jealousies of the denominational colleges persisted to plague the University after it was finally established.

Undoubtedly the State was a direct loser because the University was not established before 1850, though the beginnings of similar institutions founded early were checkered. Thus the University of Michigan consisted till 1837 of but one classical academy at Detroit; and though it became strong and renowned before the Civil

War, it received no State aid till 1867. The institution which became Indiana University received no State help till the same year. The lands belonging to the University of Wisconsin were grossly mismanaged, and the people long ignorantly jealous of it as maintained for a few "aristocratic" young men. Three separate reorganizations were attempted, and not until the last one, in 1866, was the University fairly on its feet. The Regents of Minnesota had no sooner erected their first building than they were forced to mortgage it, and under the panic of 1857 and the war their attempts to open the University were futile till 1869. Missouri not only failed to grant a cent to her University till 1867, but wasted for it a magnificent Federal grant. Even Ohio University received no direct appropriation till after the Civil War, while the lands of Miami were so mismanaged that it, after a depressing struggle, closed its doors in 1873. The West before the Civil War took, on the whole, a pride in pretentious, struggling, and sometimes worthless institutions that had better gone to the fostering of interest in the public schools. But a State University would have been of value to Illinois had it trained but a handful of men; and in those early years it might have dissipated enough of the inevitable prejudice and hostility and gained enough general regard to start even with Michigan and Wisconsin in the race they were to run.

Had public education been held at as high a level as in Michigan, had there been a considerable body of Illinoisans as keenly concerned with intellectual betterment as were the ministers of Ohio who befriended the early State institutions, or the first Regents of the University of Wisconsin, or the Trustees named for Indiana Seminary by Gov. Jennings, the

obstacles presented by the Legislature's financial shiftiness might have been overcome. Why was there no public interest to attempt to force compliance with the requirements of the Federal Government as to its land grants? It is true that the State was narrow in dealing with all forms of education. The Constitution of 1818 did not, like those of many States, assert the propriety of encouraging colleges and seminaries, nor did any down to 1870 recognize the establishment of schools as a proper public function.[1] For years the State, with its rural apprehension of religious instruction and of large corporations, strengthened by the Dartmouth College case, granted no charters without narrow restrictions. No professor of theology was to occupy any college chair, no theological department of any sort was to be created, no religious tests were to be countenanced in selecting trustees, no college was to hold more than one square mile in perpetuity. Not until 1841 were the severest of these restrictions abolished. But these were prejudices not confined to Illinois; and her indifference to the best interests of education was not different in kind, but greater in degree than that of neighboring States at the same time.

In a letter of excuse in 1829 to the Acting Secretary of the Treasury, who had protested against the way in which Illinois was borrowing the college fund, Gov. Ninian Edwards referred the non-existence of a regular system of education to the State's "very sparse and greatly dispersed population." From its great length, its greater area, the fact that nearly all portions were equally desirable, its population did not have the organized character of that of Ohio, Indiana, and lower Michigan. Edwards repeatedly expressed his feeling

[1] F. N. Thorpe, Constitutions and Charters, Vol. II, Illinois.

that it was "too early" for a central State institution of higher education.[1] In truth, the population did not increase rapidly till after 1830, then leaping by 1840 from 157,000 to 476,000, and by 1850 to 851,000. And the early population was not merely dispersed, but wanting in homogeneity. From the early days of statehood people poured in by the Great Lakes on the north, the Ohio on the south; and containing many diverse elements, the State split most definitely into camps representing northern and southern blood. In 1822-25 there was a sharp contest between slavery and anti-slavery forces which left a lasting mark; and Gov. Ford testified to the "elements of discord in the population," with the consequent injury to "the adoption of the wisest means for the public relief." At the same time, he complained of the want of pride in the State and its institutions. "Illinois can be abused anywhere with impunity. I hope yet to live to see the day in Illinois, as in Kentucky, Tennessee, South Carolina, New York, and New England, that no one will be suffered to abuse the State."[2]

Again, Illinois suffered more than any of her neighbors, much more than any except Indiana and Missouri, from financial reverses. We have noted the failure of the first State Bank. In 1839 the State's blundering internal improvement system was overturned, work upon most projects stopped, and a debt of over $10,000,000 left for improvements largely abandoned. In the spring of 1842 the second State Bank burst with a crash, doing great injury to the holders of its $3,000,000 of paper money. Gov. Ford states that when he came to office

[1] N. W. Edward's "History of Illinois and Life and Times of Ninian Edwards," p. 238 *et seq.*

[2] Thomas Ford's "History of Illinois," Chapters III and IX.

in 1842, "the State was in debt about $14,000,000 for moneys wasted upon internal improvements and in banking; the domestic treasury of the State was in arrears about $313,000 for the ordinary expenses of government; auditors' warrants were freely selling at a discount of fifty per cent.; the people were unable to pay even moderate taxes to replenish the treasury"—or thought they were. We have noted the jealousies existing between the various cities. A powerful reason, finally, was that by 1840 Illinois had developed several flourishing small colleges, the success of which seemed to leave little place for a University of the traditional educational standards. Shurtleff, McKendree, Knox, and Illinois were by this time vigorous, the latter two were centers of anti-slavery sentiment and common-school reform, and at Illinois in particular a number of State leaders were in training—Yates, Newton Bateman, Lincoln's partner Herndon, and others.

The final steps for the establishment of the University grew out of the much larger movement for the measure now known as the Morrill Land Grant Act. A laggard herself in founding a State University, Illinois led the way in securing the Federal provision which has underlain the stability and prosperity of the institutions of her sister States. The definite movement for a Federal land grant for the support of agricultural and mechanical institutes in every State originated not with Vermont, as is commonly believed, but with Illinois, and was headed not by Justin Morrill but by Jonathan B. Turner. This movement had predecessors embracing certain of its aims; it was but part of a wide and generally vague educational impulse for the benefit of the

industrial classes. But in the definite form it assumed in Illinois it was clearly responsible for the ultimate passage of the Land Grant Act.

Its leader came from the zealous group of Eastern men at Illinois College. Jonathan Turner was born on a stony Massachusetts farm, of poor parentage, and educated at Yale, mainly by money earned at "working in gardens and sawing wood." In 1833 he went out to the three-year-old college then housed in one brick building a mile west of Jacksonville, a village of less than one thousand people, and here he remained for fifteen years, with the title of Professor of English Literature and Rhetoric, but actually teaching much besides.[1] He was an even more indefatigable advocate of free public schools than President Beecher. His first summer vacation, for example, was spent in traveling through a half dozen counties on horseback at his own expense, delivering addresses in their advocacy wherever he could muster an audience. Hardships were frequent, and he once lay senseless on the prairie half a day after a heavy fall from his mount. He had studied the classics at Yale, but early tastes and the necessities of Western life gave him a strong predilection for the practical. "Agriculture" and "some branches of mechanics" had been named by the founders of Illinois College as "part of the system of education whereby the health of the students will be promoted, and their expense diminished," and the college had opened with a farm of a quarter-section, implements, and a carpenter's shop. From this he doubtless drew material for his first ideas

[1] "Life of Jonathan Baldwin Turner," by Mary Turner Carriel, pp. 12ff. Illinois College was founded by a group of Yale men, among them Jonathan's brother Asa, who in 1827 formed an association to promote "religion and learning" in the West. The faculty in 1833 consisted of five Yale men, all under thirty.

upon the mingling of practice and theory in industrial education; but for some years he was preoccupied with the problem of the elementary schools. In 1837 he was again lecturing, in 1845 he was a prominent member of the Education Society's Convention at Jacksonville, and he corresponded with Eastern educators, among them Henry Tappan, later president of Michigan, upon the subject.[1]

It was very soon after his retirement from Illinois College that Turner's beliefs as to higher industrial training found clear-cut expression. In 1837 he had spoken of democracy's duty "to augment the facilities, the resources, and the completion of knowledge until a royal road shall be paved from the threshold of every cabin . . . to the open doors . . . of our most magnificent temples of science." Upon this his intense, austere mind brooded until he felt impelled to a plan of action. In 1847 he had resigned his professorship to become a farmer and fruit-grower.[2] In 1848 we find him communicating with President Blanchard of Knox College upon the endowment and filling of a possible chair of agriculture; and May 13, 1850, taking charge at Griggsville, in the Pike County John Hay was soon to make famous, of one of the first Teachers' Institutes,

[1] The extent to which Jacksonville was a center in educational movements may be gaged from the fact that in 1833 was formed there a "Ladies Association for Educating Females," and in 1834 an "Association to Advance the Course of the Common Schools," which, having announced that spring its intention of sending out an agent, may have been largely responsible for Turner's tour. The various teachers spoke constantly in the thirties on education; and in Jacksonville in 1836 was organized the Illinois Teachers' Association. See Pillsbury *ut supra*, and the files of the *Sangamo Journal*.

[2] Prof. Turner was the first man to see the usefulness of the osage orange as a hedge-plant, and to introduce it to the country at large. He long grew at Jacksonville a greater variety of trees than could be found in the Smithsonian Gardens.

he made his first notable appeal for an advanced education for farmers and mechanics.

This appeal, a presidential address, was entitled "A Plan for a State University for the Industrial Classes," and centered around the thesis that the workers need a "system of liberal education for their own class, and adapted to their own pursuits; to create for them an industrial literature, adapted to their professional wants; to raise up for them teachers and lecturers for subordinate institutes." With a harsh criticism of the older learned institutions, "which make men of books, not men of work," he joined a project for an institution with a complete equipment in physics, chemistry, and industry, with experimental farm and orchards, and with a museum of models of all useful implements and machines. This should offer instruction in all the sciences and arts, including commerce, mining, transportation, economics, government, and not excluding the classics, should prosecute constant investigations, encourage lower institutes and schools, and coöperate with the Smithsonian Institution in Washington, then just incorporated, which Turner strangely viewed as an instrument of popular education. Horticulturists and entomologists should be "ever abroad at the proper seasons" to find remedies for blights, rusts, and mildews, and the chemists should "carefully analyze the various soils and products of the State." The University should be open to all classes of students of proper age, and they might study for a few months or for years. For its support he would set aside the college and seminary funds for which the sectarian colleges and supporters of normal education were quarreling. The teachers and citizens at Griggsville offered the scheme, Turner tells us, "warm, earnest, and decided support," and the rural

press, eager to divert the funds to agricultural education, gave it much notice.[1]

The most immediate result of the address was to move the Buel Institute, a central Illinois association of farmers, to call a meeting for November, 1851, "to take into consideration . . . measures . . . to further the interests of the agricultural community, and particularly to take steps towards the establishment of an Agricultural University." The Buel Institute, organized by Benjamin Lundy, numbered many progressive citizens, among them two brothers of the poet Bryant, and was addressed by men of national note—Lovejoy, John M. Palmer, Lyman Trumbull, and others. The meeting was liberally advertised, especially at the county fairs which preceded it.

Here Turner received his first large hearing. He was made chairman of a committee which presented a resolution "that we take immediate measures for the establishment of a University in the State of Illinois, expressly to meet those felt wants of each and all the industrial classes of our State, and that we recommend the foundation of high schools, lyceums, and institutes in each of the counties on similar principles." Turner then proceeded "in an able and interesting manner to unfold his plan for the establishment and maintenance

[1] Paul Selby states ("The Part of Illinoisans in the National Educational Movement," 1851-1862, Publication No. 9 of the Historical Library of Illinois, p. 214) that at the Teachers' Institute Prof. Turner merely "suggested a plan for the establishment of a State University," and that his plan for a national system of education was broached a few weeks later, in an independent address at Griggsville. The above account follows Mrs. Carriel. It also follows Mrs. Carriel in treating as identical, or substantially so, the plan which Prof. Turner unfolded at Griggsville and that which he presented to the Granville Convention eighteen months later. The quotations are from the latter paper, the only one preserved, which she asserts to be a copy of the former.

of an Industrial University," this plan being almost identical with that he had explained at Griggsville. Not only were the resolutions adopted, but the convention requested Turner to furnish the plan for publication in the *Prairie Farmer* and in a pamphlet of which 1,000 copies should be distributed, instructed the members to do all they could to promote reading of the pamphlet, and petitioned the Governor and Legislature to move towards the establishment of the institution. Before adjournment steps were taken to obtain lecturers and hold "primary assemblies" to influence the Legislature.

Thus far the plan referred only to Illinois and was little more than a movement among the farmers to obtain for themselves, as opposed to the sectarian colleges, the Federal funds. But Turner already had visions for converting it into a national stirring of the industrial workers, which would result in the planting of a national chain of his universities. In February, 1852, he suggested that the Buel Institute petition Congress for help. In June a second convention of his supporters was held at Springfield, which, attended by representatives of the colleges, was marked by hot dissensions, but which adopted a memorial to the Legislature clearly intended to make the movement national. It desired that a beginning should be made in higher industrial education, and, it recited, "*if possible on a sufficiently extensive scale to honorably justify a successful appeal to Congress, in conjunction with eminent citizens and statesmen in other States, who have expressed their readiness to coöperate with us, for an appropriation of public lands for each State in the Union for the appropriate endowment of universities for the liberal education of the industrial classes.*" This convention also

emphasized the desirability of a normal department in the University.

A few months later a third convention, in Chicago, took still further steps. It resolved "that this convention memorialize Congress for the purpose of obtaining a grant of public lands to establish and endow universities in every State in the Union"; and to promote various ends an "Industrial League of Illinois" was formed, with Turner as director. In January, 1853, a fourth convention was held at Springfield, and the Legislature was urged to present a memorial to Congress praying it to appropriate to each State not less than $500,000 worth of land for these universities. The next month the League was chartered, and promptly began to scatter circulars and a pamphlet containing Turner's address and memorials, and to correspond with those interested in industrial education. The national movement was well launched.[1]

That Turner's plans found a ready response in many parts of the United States is not strange. Theories of an advanced education differing from that of the traditional academy and college had found embodiment long before in polytechnic schools and manual labor classes.

[1] It is difficult to exaggerate the intensity of the opposition Prof. Turner had to meet in Illinois. As a member of the Board of Trustees of the Hospital for the Insane during its construction at Jacksonville a few years previous he had thwarted the plans of a few "political speculators" to make money out of it and its offices; and this clique, through the Springfield, Jacksonville, and Chicago papers, visited upon him unsparing ridicule and abuse. One of the editors of the Morgan County *Journal* was attacked with knife and cane for defending him; and during Prof. Turner's absence in the interests of his educational plans his barn was burnt down, with a loss of about $4,000. The heads of the sectarian colleges were far above such methods, but they treated Prof. Turner with narrowness and bigotry, arguing that all attempts at higher State education were doomed to failure, and that they tended to the negation of religion. Turner MSS.

As early as 1820 the Maine Wesleyan Seminary had experimented in joining practical work with formal instruction, principally with a view to lightening the expenses of the students. Rensselaer Polytechnic Institute had been founded in 1824; the Oneida Institute of Science and Industry in New York in 1827, and others soon after. Oberlin College was opened in 1833 as a manual labor school, and for the first twenty years a majority of its graduates supported themselves while in college. Certain Western normal schools had before 1840 offered industrial courses, including farm training; and besides Illinois, other colleges in Turner's own State had industrial departments. Thus the Knox Manual Labor College was established in 1838 at Knoxville—later to become plain Knox College.[1] McKendree College had established a manual training shop in 1836. And in the early fifties proposals for the higher education of farmer, mechanic, and business man on a large scale, combining provisions drawn from European institutions and the polytechnic schools with certain thoroughly democratic plans for the cheapening of education, had spontaneously sprung into life all over the country.

Typical evidence of this is found in the agitation which had for some time been gathering force enough in New York to create the so-called People's College. This institution was backed from the beginning by Horace Greeley, was chartered in April, 1853, and its cornerstone laid in 1858, at Havana, New York, President Amos Brown, Greeley, and Mark Hopkins speaking. Its course was liberal, but in part vocational, enabling grad-

[1] It was the New York minister, Gale, who founded the Oneida Institute, who also established Knox College at the "Mesopotamia in the West" which later took his name.

uates "to enter at once upon the business of their choice," and it was to elevate labor by requiring farm or shop work on given days in the week; while it was to admit any adult to any course. Greeley asserted the founders' purpose to effect "a perfect combination of study with labor." He quoted Hazlitt on the ignorance of the learned, and ventured a description of the new meaning it was necessary to give learning: "The farmer, mechanic, manufacturer, engineer, miner, needs to understand thoroughly the materials he employs and molds, and the laws which govern their various states and transformations. A thorough mastery of geology, chemistry, and the related sciences, with their applications, is today the essential basis of fitness to lead or direct in any department of industry. This knowledge we need seminaries to impart—seminaries which shall be devoted mainly . . . to natural science, and which shall not require of their pupils the devotion of their time and mental energies to the dead languages." Other speakers dwelt on the plan for a few hours remunerative and instructive labor daily. Thus Turner had spoken, and several others, all drawing their beliefs from the common educational currents of the time.

In Massachusetts, for example, industrial education was advocated by the head of Amherst in 1851, and in the same year Edward Everett, Marshall P. Wilder, Henry W. Cushman, and others signed a memorial by the Board of Agriculture asking for the establishment of an agricultural college. In 1852 the Legislature passed resolutions favoring the appropriation of public lands to endow a national Normal Agricultural College, on the plan of West Point, but to train teachers of rural science. The *New York Horticulturist* had for some time been urging "education among the Industrial

Classes," and an agricultural college, with a school in the mechanic arts added, had been recommended in New York by Gov. Fish in 1849 and 1850, and by Gov. Hunt in the two succeeding years, as well as by a special commission appointed in 1849. In Congress the subject of industrial education found several exponents. Thus in April, 1852, Representative Eben Newton had called attention to the sixty agricultural schools and colleges in Russia, the five colleges in France, the two in Scotland, the two in Italy, the thirty-five colleges and schools in Bavaria, and the thirty-two each in Prussia and Austria, all government-supported, and asked why there was no similar provision in America. Two months later Representative Horsford, remarking that "about five millions of our population are owners of the soil, and three times that number are engaged in its cultivation; yet the Government has failed . . . to provide the means of instruction and encouragement which . . . this great interest requires," suggested the desirability of one or many agricultural West Points.

The proposal for the appropriation of public land for higher education in each State was also calculated to strike a responsive chord. The older States had not watched the Federal endowment of Western school systems without jealousy. In the debates of 1803 on Ohio's admission, one Pennsylvanian objected to land grants for one section, holding that the public lands were common property. In 1818-19 a futile effort was made in Congress to grant each State not over 100,000 acres for a University. It was later renewed, and in 1821 nine of the older States memorialized Congress for educational land grants. In the following decade education and internal improvements were linked in the public mind, and repeated efforts were made to have the public

lands used as a permanent fund for these twin purposes. In spite of the force of the position of States like Massachusetts, that the lands were Government and not common State property, and that they were not gifts to the State in which they lay, but simply a reservation of part of the State's natural wealth for a distinct purpose, the notion that each might get a new grant persisted. Soon after 1850 we find Michigan and New York Representatives introducing bills for public land grants to these States for education.

The merit of Turner's plan lay not in any entire originality, but in the combination of unoriginal parts into a new, appealing, and highly practicable whole. Most projects for industrial education were inchoate, and all were local; Turner's at once took its place in the foreground because of its definiteness, force, and national scope.

Even before it had begun to be pushed by the Industrial League, the plan had claimed attention outside Illinois. Turner's address to the Granville Convention had been reproduced in the year book of the Illinois State Board of Agriculture in 1851, and in the United States Patent Office Report for the same year. It had been published by the *New York Horticulturist,* with warm commendation, in July, 1852. The New York *Tribune* printed it two months later, Greeley speaking heartily of the movement as analogous to that for the People's College, and commending the vigor of Turner's utterance. The Philadelphia *North American* also published an editorial praising it, and the *Southern Cultivator* declared that "the plan of Prof. Turner is full of valuable practical suggestions, and the memorial which accompanies it . . . [that of the second convention] should be forced upon the attention of the General Gov-

ernment.'' On the same day that the League was chartered the Legislature adopted resolutions requesting the State's Representatives, and instructing its Senators ''to use their best exertions to procure the passage of a law in Congress'' granting a liberal land endowment for a system of State industrial universities; while it authorized the Governor to communicate with other State executives, and to have copies of the resolutions sent to other Legislatures. Here was a move to attract wide interest, and the New York *Tribune* remarked, after commenting on the novelty of the land grant plan:

> The Legislature of Illinois has taken a noble step forward, in a most liberal and patriotic spirit, for which its members will be heartily thanked by thousands throughout the Union. We feel that this step has materially hastened the coming of scientific and practical education for all who desire and are willing to work for it. And Congress has already been touched, through the efforts of the Illinois Industrial League. Mr. Washburne has been complimented, in connection with his State, for the action taken, and other State Legislatures are imitating our good example.

The Industrial League immediately published a pamphlet, called ''Industrial Universities for the People,'' giving the whole history of the movement and its documents, with a hortatory introduction by Turner. ''With what unexpected velocity,'' he rejoiced, ''the darkness has sped away before the light in one short year!'' Turner himself began lecturing and commissioning lecturers, and we learn from his correspondence that five men were ready in 1853 to speak for the plan and in opposition to any division of the educational funds, for $500, without expenses, and at some risk of nonpayment; one lecturer was very active. As director of

the League the farmer-professor wrote constantly all over the country.[1]

Despite the instructions given Illinois Congressmen, the introduction at Washington of any measure embodying Turner's views was a difficult matter. The subject of agricultural education had been kept alive in the debates on the proposed Agricultural Bureau. There were still advocates of a single national agricultural college, as Caleb Lyon, who in 1854 was attempting to obtain support for a measure for the establishment of one "somewhat after the plan of the Georgians in France." But Turner's far-sighted scheme for a land grant to each of the States went against the convictions of most of the men in authority at the time. President Pierce had let it be understood that he was opposed to any such measure. In 1854 he had vetoed one embodying Dorothea Dix's idea for the provision of such Federal assistance to State hospitals for the insane. Representative Richard Yates was friendly to the plan, having been interested in all Turner's speeches since that at Granville, for which he had sent at once; but he felt that nothing could be done with it under Pierce. On

[1] In February, 1853, Turner writes that he had called upon Gov. Matteson in regard to his scheme; that he had written to Messrs. Yates, Seward, Giddings, Shields, and Douglas, to Gov. Seymour of New York, to Gov. Wright of Indiana, to the Patent Office and Secretary of the Interior, and to many agricultural, mechanical, and general papers and associations; and that "year in and year out we shall make appeals to the people and to the Assembly in their [the farmers' and mechanics'] behalf." One Rutherford was a popular lecturer, and he was followed by agents in every locality, who persuaded men to join the League and subscribe to its funds. One of the chief mass meetings held occurred in Chicago, January 25, 1854, under call of the Council and Mayor and of the Mechanics' Institute, and after a speech by Prof. Turner, resolutions in support of the objects of the Industrial League were adopted. Similar meetings were held all over the State. Turner MSS.

March 20, 1854, Representative Washburne and Senator Shields presented the resolutions of the Legislature "relative to the establishment of Industrial Universities" to both branches of Congress at once. Three weeks later Yates asked Turner to draw up such a bill as he wanted, suggesting at the same time that it would be politic to omit the proposed clause for a connection between the universities and the Smithsonian Institution. This was done, but Yates took no action with the measure; and he was not reëlected the following autumn.[1]

Out of these delays and false starts was finally shaped the Morrill bill, which was introduced December 14, 1857. Buchanan came into office this year, and it was thought that under him there was a better opening, though a prejudice growing out of the too-lavish land grants of the early fifties persisted. In early October Turner wrote to Senator Lyman Trumbull, of Illinois, urging him to take up the measure. The latter agreed that "the idea is a grand one, if it could be carried out and made practical." But he pointed out the prejudice, and stated that it was especially strong with reference to new States, which had obtained so much. He recommended that a member from an old State be induced to present the matter. Soon after, therefore, as Prof. Turner's daughter states, it was determined to send all the documents and information to Representative Justin S. Morrill, a new member who had already shown himself a warm friend of agriculture,

[1] Early in 1856 the League sent one W. F. M. Arny to Washington "to procure an appropriation of land for universities," as Arny put it in a letter to Turner; and he succeeded in getting the subject before the Senate Committee on Lands. At the same time the State Board of Education petitioned Congress on the matter.

with the request that he introduce the bill. He reluctantly consented. The measure called for the grant to each State and Territory of 20,000 acres of public land for each Congressman or delegate according to the apportionment of 1860. The States were to establish within five years schools of agricultural and mechanical arts, though "without excluding other scientific and classical studies," and the lands were to be sold to provide a permanent fund for them.

The history of the Morrill bill for the next few years was checkered. It was reported back unfavorably by the Committee on Public Lands, and was resubmitted, Morrill making an able speech in its favor in April, 1858. Turner's daughter records her father's anxiety lest this speech be half-hearted, and his delight at its fervor. The bill passed the House, but went over to the next session in the Senate. Here opposition was strong, and it did not pass till 1859, when it was promptly vetoed by Buchanan. The main reasons he alleged were that the flooding of the market with so much land would hurt the Government's sales, and would give large areas at low prices to speculators; that the States ought not to depend on the Federal Government for such assistance; and that the bill was unjust to existing colleges. He felt also, with the South, that such paternalism encroached on State rights, even to a degree rendering it unconstitutional, and it was evident that nothing could be looked for during the remainder of his term. But supporters of the bill were hopeful that victory could be won under his successor, and at a meeting of the Illinois State Agricultural and Horticultural Societies at Bloomington in 1860, where a report was heard from an agent who had been sent to see what was being done in other States,

it was urged that the Morrill bill again be submitted.[1] Victory, indeed, was now near.

The final passage was much expedited by the coming of the Republicans into power. In the summer of 1860 Lincoln promised Turner at Decatur that, if elected, "I will sign your bill for State Universities." A little later Douglas met Turner on a train near Peoria, and made the same pledge. In June, 1861, the defeated Douglas, then Senator, wrote Turner requesting his plan and bill for a system of industrial institutions and a history of the movement, saying that he wished to introduce the measure at the next session himself; but he soon after died.[2] Morrill brought it in early in December, but it met with an adverse committee report. Senator Benjamin F. Wade finally introduced it in May, 1862, and after a ready passage by both houses, it was signed by Lincoln on July 2. The act passed was substantially the same as that vetoed. The chief differences were that 30,000 acres, not 20,000, were granted for

[1] At this meeting Turner advocated the passage of the Morrill bill; and turning to State affairs, "suggested the necessity of union and the entire abandonment of sectional interests. He deemed the failure of agricultural societies heretofore to be due to making manual labor schools out of them, to entanglements with State and political interests, and to the placing at their head someone whose tastes and spirit was not agricultural." He praised the work of an agricultural department lately established in connection with the University of Chicago.

[2] Prof. Turner told Dean Davenport shortly before his death that he and Lincoln had discussed at length the subject of a higher education, appropriate to the great mass of people. Turner's correspondence with Douglas on the matter began in 1857, when not merely Yates, Shields, and Washburne, but Representative Owen Lovejoy and others had expressed hearty approval of his plan. Douglas declared: "This educational scheme of Prof. Turner's is the most democratic scheme of education ever proposed to the mind of man," and had he not died, the bill passed would perhaps have borne his and not Morrill's name. Mrs. Carriel's Life of Turner, p. 160. Turner MSS.

each member of Congress; that States were excluded while in rebellion; that they must accept within two years, not five; and that instruction must be given in military science. By a supplementary act four years later the time-limit was extended so that States need not accept before July, 1869, and need not place the college in operation until the same month in 1874. Territories were granted land according to Congressmen at admission, and they also were given three years to accept and five to provide the college. Thus became law an act under which benefits have been granted to seventy institutions, now enrolling yearly approximately 100,000 students.

Morrill never acknowledged any debt to Turner for the idea of the bill. He stated that he did not know who or what had suggested it to him; that he was familiar with the agricultural schools of Europe, that he saw the limitations of existing colleges, in not more than a dozen of which even a satisfactory course in chemistry was offered, that he himself was son of a blacksmith, and that he felt it wrong that the public domain was going so largely into private hands. Indeed, by 1858 the idea, thanks mainly to Turner, was almost public property. But there is little doubt as to the directness of Morrill's inspiration. Besides the testimony of Turner's daughter, we have a letter of Morrill's, written in 1861, in which the latter refers to previous communications and expresses his delight that Turner's "fire" had "not all burned out." Finally, the language of the Morrill Act shows a close resemblance to that of the plans drawn up by Turner. Morrill called his bill one "to promote the liberal and practical education of the industrial classes in their several pursuits

in each State of the Union." The resolution adopted by the convention at Springfield in June, 1853, spoke of a measure "for the liberal education of the industrial classes and their teachers in their various pursuits"; while the petition to Congress in Turner's pamphlet of the Industrial League spoke of "an industrial University for the liberal education of the industrial classes in their several pursuits and professions in life." Such a close resemblance in phraseology cannot have been the result of chance.

The only hope for a State University in Illinois now lay in the State's acceptance of the benefits of the Morrill Act, for since Turner had begun his fight for a Federal grant, a State Normal University had been established at Bloomington, and to it given the income from the college and seminary funds; while an abortive Agricultural College at Irvington, chartered in 1861, had received the trifling pieces of land belonging to the seminary fund left unsold. As early as February, 1863, this acceptance was made. But the fight for an undivided institution was just beginning. Even before the acceptance a bill had been introduced for the establishment of the "Agricultural College of Southern Illinois," and the "Agricultural College of Northern Illinois"; this being an ill-concealed attempt to divide the Federal funds between Shurtleff and Knox Colleges, for men connected with these institutions were named Trustees, and were given power to "make arrangements with any existing colleges" for agricultural instruction. To this plan Turner, with the Industrial League and the State Agricultural and Horticultural Societies behind him, was unalterably opposed. "We wish now wisely to begin

a peculiar university," he wrote, "which our posterity can erect into the strongest, broadest, and best university on the face of the earth. . . . Our institution is wholly new."

The measure for a division of the land grant failed, as similar measures failed in other States, notably New York; and the public opposition to the designs of several of the literary colleges, manifested especially by a series of mass meetings of farmers and mechanics, caused those who wished such a division to give over further attempts. But they were followed by Chicagoans who believed that the Federal grant should be split between an agricultural and a mechanical institution, the one to be located in some rich farming region, the other in the metropolis. Though their design, too, failed, the confusion among the various interests was sufficient to block a bill introduced by the indignant farmers and others, Turner at their head, at the session of 1865—a committee of six under the chairmanship of Turner appointed at the State Fair of 1864 having framed it. On the whole, however, the course of events was favorable to those desiring a single new State institution, and when the session ended they looked forward to a prompt victory. Plans were at once laid, at a meeting held in Bloomington in December, 1865, and elsewhere, for reintroducing the measure at the next biennial session.

The eleventh section of the farmers' bill, as it was duly brought forward again in 1867, provided for a commission to locate the University; and its discussion at Springfield opened one of the strangest contests in the State's history—that for the location of the Illinois Industrial University. In 1865 Champaign County

was already a prominent contestant. Some speculators [1] there had a few years before obtained a charter for the Urbana and Champaign Institute, had purchased about one hundred acres between the two villages, and had agreed to erect on it a brick building—upon an understanding that a large part of the area, when divided into lots, was to be bought by people of the community—subscribers—at advanced prices.[2] The war had left each side to the contract unable fully to carry out its bargain, and each was eager to find some disposition for the unfinished structure. Late in 1864 citizens had called the Governor's attention to the facilities offered by the building for a prompt opening of the University, while the supervisors appointed a committee to offer building, grounds, and farm to the Legislature as a site. This committee formed a combination at Springfield which amended the eleventh section to direct the location of the school of mechanic arts in Chicago and of the University proper at the Twin Cities, and made optional the location of the agricultural department in the southern part of the State, all on condition that stated departmental endowments were offered—a plan diabolically calculated to wreck the University forever. The "ring" carried the bill in the House, but failed to get it through the Senate.

Meanwhile other localities were awakening to the op-

[1] Messrs. J. C. Stoughton, J. E. Babcock, and George Harvey, the builders, perhaps deserve the name of promoters. Stoughton was a Methodist minister.

[2] Urbana was one of the older settlements in this part of the State. Champaign was first organized because the Illinois Central Railway, meeting some difficulty in obtaining a right of way through Urbana, chose one two miles to the west, where it placed a combined passenger station and hotel and large shops—although the vicinity was described as "an interminable slough." Champaign was incorporated about 1855, and for decades the feeling between the towns was to be bitter.

portunity of securing the University. In December, 1865, a convention of farmers, mechanics, and manufacturers at Bloomington spoke emphatically again in favor of a single institution, and appointed a committee to prepare another bill. In October of the next year a meeting of the college presidents of the State in Chicago declared in favor of the division of the fund. But they were laughed at, and mass meeetings began to be held at various centers to initiate steps to obtain the site of a new institution. The chief aspirants, besides Urbana-Champaign, were Chicago, Springfield, Peoria, Bloomington, Lincoln, and Jacksonville. That Urbana-Champaign was victorious was due mainly to the energy and adroitness of one man.

This one man, Clark Robinson Griggs, had been a member of the Massachusetts Legislature,[1] had settled at Urbana as a farmer, had accumulated some money as a sutler in the Civil War, and was now a railway promoter. Griggs's shrewdness, ability to manage men, and judgment in perceiving just where doubtful political transactions would become illegal, made him an ideal agent for the towns. Few men in Illinois had so winning a personality, and few more enterprise. He made friends with ease and used them with dexterity. Moreover, he fully believed in the claims set forth by his community. The eastern section had been neglected in the allotment of State institutions; it had a more exclusive interest in agriculture than others; and the Twin Cities had shown their interest in education by raising the new building. His appointment as agent he received from a committee of citizens late in 1866; and he was soon after elected to the lower House

[1] Griggs had had his first experience in legislative matters in the Massachusetts House during the struggle over the Hoosac Tunnel bill.

on the Republican ticket, and given the management of a fund of at least $20,500,[1] raised by subscription, together with promises of the towns' earnest support. Meanwhile, in October, Champaign County had voted a bond issue of $100,000 for the purpose of obtaining the new university.

During the autumn Griggs set out on a tour of the State, avoiding the rival cities and interviewing only members of the lower House. In five weeks he thus saw about half the eighty-five Representatives, and pledged fifteen or sixteen. He made himself acquainted at Springfield, moreover, with Gov. Richard Oglesby and Lieut.-Gov. Bross, and induced both the Republican and Democratic State Chairmen, upon compensation, to become aids to Champaign County. Most important of all, he set himself to manipulate to his own ends a number of special local interests that would be before the Legislature. Southern Illinois wanted a new penitentiary then being projected; Peoria and Springfield were rivals for the new State House; and Chicago wanted legislation in connection with her park and boulevard

[1] The exact amount given Griggs to disburse in lobbying will probably never be known, for many of the contributions were unrecorded. However, on May 1, 1867, the supervisors of Champaign County listened to a report by the committee which had served at Springfield, and which, according to the Champaign *Union and Gazette*, showed "that $5,000 had been received from the county, $3,000 from the cities of Urbana and Champaign, and $12,500 from other sources. All of which had been judiciously and cautiously expended." The supervisors' minutes of Sept. 18, 1867, show that the committee then reported "in reference to the disposition of the $45,000 voted by the towns of Urbana and West Urbana, to aid in securing the location of said institution in this county—which report shows that the sum of $30,873.39 was expended in payment for land offered the State, for shrubbery offered the State, and in settling various bills contracted during the session of the last Legislature, and for services rendered by sundry persons." In Twin City newspapers it was later plainly referred to as "the corruption fund."

system, for she was then planning the steps that a few years later were temporarily to give her the title of the "Garden City." Griggs also pointed out at Pekin and Danville that the location of the University at Urbana would assist the prosperity of the new railway planned to connect the three towns, and everywhere he urged that Jacksonville already had her share of State-supported institutions, that Bloomington had a normal college, and that Chicago would grow fast enough without fresh advantages, while none of the three cities could offer such agricultural facilities as Urbana-Champaign, in the heart of the most fertile prairie region of the State. An interviewer of Griggs in 1915, when the old man was ninety-four years old, still found some of the phrases of these appeals fresh in his memory.

The tactics of Griggs at the legislative session of 1867 were calculated to win respect even at a capital where the contemporaries of Lincoln and Douglas had made a fine art of political maneuvering. The plans of the County Committee were completely shaped by him. Spacious quarters were engaged at the largest hotel in Springfield—the Leland: offices, bedrooms, a buffet, and a reception room which held two hundred people. Here he, the Democratic and Republican Chairmen, and the committee began lobbying on a large scale. Members of either party, hostile or friendly, were invited to the hotel for liquor, for light refreshments, or for huge oyster suppers or quail dinners. They found here a place to lounge in easy chairs, to chat or read newspapers, and to listen to legislative gossip. They were urged to bring with them constituents who happened to be in town, and to order for these constituents as freely as for themselves. They were supplied with cigars, and

groups of them were taken to the theater. At the week-ends entertainments of some size were arranged. Besides being agreeable, all this impressed the Legislature with the zeal of Champaign County, and in the end many a member voted for the bill simply "because Griggs and his fellows worked so hard."

Meanwhile Griggs, by having himself pushed for the nomination as speaker, and then skillfully offering to withdraw his candidacy under certain conditions, had become chairman of the Committee on Agriculture and Mechanic Arts, which was to pass on all bills for the location of the University. It was his right to nominate a majority of the members of the committee.

The House had no sooner organized than a member named Baldwin introduced a bill dealing with the location of the University, and it was referred without debate to Griggs's committee.[1] He then introduced his own bill with the eleventh section calling for the location of the University at Urbana, but instead of holding it in committee had it laid upon the table, so that it could be taken up and put upon its passage whenever he deemed that he had sufficient strength. It was by this time plain that Urbana was to have three main rivals—Lincoln, Bloomington, and Jacksonville. The campaigns of each contestant had two different aspects. On the one hand, each had its group of lobbyists laboring energetically, and with only secondary attention to the real merits of the case, to influence the Assemblymen. Prof. Turner was not a member, but he was on the ground, and by his wide influence ably assisted Representative Epler, of Jacksonville; he was especially bitter against

[1] For this and subsequent matter on the Legislature's actions see House Journal, 1865, 670, 807; 1867, vol. I, 240; vol. II, 441ff; Senate Journal, 1865, 886; 1867, 1047ff.

Champaign County because of its infamous bargain with Chicago in the preceding session. Gen. Hurlbut represented Bloomington, while Lincoln, with one McGalliard for spokesman, was felt from the beginning to have little chance. The fact that Gov. Oglesby and Lieut.-Gov. Bross, both skillful politicians, men of wide interests, and of affable personality, early came out in Griggs's favor, greatly helped the latter. He was assisted even more by Robert G. Ingersoll, then Attorney General, and later famous as lecturer, orator, and agnostic—a burly, brilliant man who liked Griggs's energy and intelligence. The other element in the contest was the material inducements held out by each aspirant, and the arguments each put forward on the ground of State policy. With the aid of his committee, Griggs blocked all action on the location till he was quite ready.

Cook County, with Chicago, contained in 1865 less than 220,000 people, Sangamon County, with Springfield, less than 50,000, and the counties in which Jacksonville, Bloomington, Lincoln, and Urbana-Champaign lay from 18,000 to 39,000 each. But Chicago and Springfield failed to make any material offer, and the other four centers, with the population surrounding each, were about equal in financial ability. A bill had been passed early in the session allowing any community to make a bid, and giving it power to vote bonds and make any other financial arrangements necessary. The hope of many legislators was that the competing localities would raise the bids so high that at the start a sufficient endowment would be procured to make a minimum of State help necessary.[1] The bids were brought forward in such

[1] Under the Morrill Act, Illinois received scrip for 480,000 acres of land. The Act made an inequitable distribution of benefits, New York, for example, being entitled to 990,000 acres, Kansas to but 90,000.

manner that they could be increased as the session wore on, Urbana-Champaign in especial making an effort to keep her pretensions, at least, ahead of those of other cities. Jacksonville was not second, however, in the seriousness with which it took the contest. An election held there on the question of covering by taxation the amount needed for a large offer failed of its object, but a committee of citizens thereupon, as in the other three counties, undertook to raise the money needed largely by subscription.

Early in February a joint legislative committee was appointed to visit the competing cities, and determine the exact value of the property, bonds, and cash offered by each. The showing was more favorable to Jacksonville than any other. That community was estimated to have offered the equivalent of $491,000. The counties in which Bloomington and Lincoln were located were estimated to have set aside property and bonds valued respectively at $470,000 and $385,000, and at Bloomington the Normal University would have been merged with the new institution. Champaign County found herself at the foot of the list, for the estimating committee computed the total of her offer at $285,000. This investigating committee was thought to be prejudiced against Urbana-Champaign and in favor of Jacksonville, but its figures were doubtless roughly correct. When soon after the measures of the various counties were voted upon the alignment had not changed. Jacksonville's version of the eleventh section of the general bill offered 237 acres of land, the Berean College building, the Illinois College building, library, equipment, and $90,000 endowment, and $250,000 in bonds. Bloomington's version would have given that center the institution on condition that it was locally endowed with

143½ acres, $400,000 in bonds, and $50,000 in freight. Lincoln offered $350,000 in bonds, and $50,000 in freight. Champaign County offered the new Institute building, which had been extravagantly praised by the legislative committee on its visit in 1865; 980 acres of land, much of it near the building, and none of it over three miles away; and $152,000 in bonds, freight on the Illinois Central, and fruit and shade trees. It is evident that Bloomington and Jacksonville were fairly well matched, and Champaign County was well behind them. The one factor that proved decisive in her favor was that her committee was well headed, and spent a few thousands more on its lobby than did any other: by the use of this money, many believed at the time in an illegal way, and by artful and unremitting tactics, Griggs finally won.

There was little argument on the floor of the House, but much in the corridors, and here Griggs used effectively his contention that Jacksonville had already been given her share of plums in the asylums for the deaf, dumb, blind, and insane located there; that Bloomington had the normal school; and so on. One of the chief arguments against Champaign County, its inaccessibility except on the north and south line of the Illinois Central, was destroyed when a charter was assured early in the session for the Danville, Urbana, Bloomington, and Peoria Railroad, running east and west. And Griggs had perfected his plans for logrolling with other communities. Despite the opposition of the Chicago *Tribune*, his bargaining with the Chicago Representatives bore fruit when they made no specific offer for the University (though they proposed a bid for the mechanical branch), and with Springfield and Charleston when they also refrained. He made approaches to

the backers of the canal project then pending for the improvement of the Illinois-Michigan canal and its extension to the Mississippi near Rock Island. He also redoubled his entertaining in Springfield, and he had his committee hire a special train to take the whole House over to Urbana-Champaign to inspect the proposed site, and entertained it there at dinner. His use of money bred a general whisper that he was guilty of bribery, and Prof. Turner, in angry desperation, finally came to him and threatened to have him called before the bar of the House and put upon his oath that he was not using improper means. Griggs stoutly denied any illegal practices, and the Jacksonville members, seeing how impolitic unsupported accusations would be, restrained Turner.

The culmination of the contest came on the afternoon and evening of February 20. Epler first put Jacksonville's fortunes to the test by moving that section eleven be stricken out and one for the location of the University in that center substituted. The motion was defeated. That night the halls and galleries were full, and when the debate reopened, Gov. Oglesby and Attorney General Ingersoll, in an impressive pause, entered and took seats near Griggs in token of their support of him. The amendments for Bloomington and Lincoln were successively called up, and defeated. Griggs then moved that the bill for Urbana-Champaign be put upon its passage, and, after he had spoken briefly in its favor, it was carried by a vote so heavy—67 to 10—that not merely the Governor and others, but even the members from Jacksonville, crowded around him to congratulate him. Passage in the Senate, where Tincher of Danville had the measure in charge, followed as a matter of course, though here one bitter member

offered an amendment referring to the fact that the bill "ignored a bid from Bloomington . . . $189,000 better than that of Champaign County," and was "passed by a combination with the new State House, canal, and southern penitentiary 'ring.' "

What the feeling was in many parts of the State at the time the University was thus located may be gathered from the statement of Turner's daughter that during all his years of arduous work for the education of the industrial classes, she had never seen him so discouraged as by this legislative decision. "Rightly or wrongly, he believed that the University had been placed in the hands of those who wished to use it only for their own selfish purposes, with no consideration for the great blessing it was intended to be, or appreciation of the thought and labor bestowed upon its conception and birth." Farmers all over the State had distrusted Champaign County ever since its effort, in 1865, to win the University by breaking it to pieces. They took its triumph, following such persistent lobbying, as an evil omen. In Jacksonville, Lincoln, and Bloomington the feeling was so strong as seriously to hurt the University for many years. In Chicago the *Tribune* applauded Prof. Turner's statement that "this is the first time in my life I ever knew a valuable piece of property to be knocked down to the lowest bidder." To this sectional dislike was to be joined the opposition of the sectarian colleges, which were still pointing out that Connecticut, Rhode Island, and New Hampshire had given part or all their shares of the Federal grant respectively to Yale, Rhode Island, and Dartmouth, and which might have been silenced by the choice of Jacksonville and Illinois College as the site.

Even now it may be contended that the location of

the University was a mistake. It went to two mere hamlets, in a sparsely settled region regarded as little removed, in large part, from a marsh: the flattest, plainest, most monotonous section of Illinois. It was difficult of access, and the "White Elephant"[1] in which it was to be housed was ill-adapted to its purpose. At Jacksonville the University might have suffered from the influence of the too rigidly practical and utilitarian ideas of Turner, but there and at Bloomington it would have been built on the strong foundation of an existing institution; at Springfield it would have aroused the more direct interest of the State; and at any of the three its natural environment would have been more attractive than at Urbana.

[1] As the opponents of Champaign derisively called the building, which had been planned to cost, with its grounds, about $100,000, and was worth at most $40,000.

II

BEGINNINGS OF THE UNIVERSITY

Organization. The Course of Study. Regent and Trustees. Buildings and Faculty. The Fight Against the Agricultural Extremists and Sectarian Rivals. Entrance Requirements and the Growth in Registration. State Indifference. Admission of Women. Financial Difficulties. The College Government and Student Life.

It was provided in the act locating the Illinois Industrial University that the Governor should appoint a Trustee from each Congressional and judicial district, and that the Board thus constituted should hold its first meeting in March, 1867. The Governor, the State Superintendent of Public Instruction, and the head of the State Agricultural Society were *ex-officio* Trustees, while the Regent was chairman. The employment of the clumsy term "Regent" was due to the fear of many that a conventional "President" would lust after the conventional studies of metaphysics and the classics; one Trustee later introduced a resolution that "any member of the General Assembly is competent to hold the office of Regent"! The number composing the Board, thirty-two, was found too great for the proper dispatch of business, and gave the chairman unusual power.

The organization of the University was begun promptly by a meeting in the House of Representatives on March 12. The Regent's salary was fixed at $3,000, and a treasurer elected in John W. Bunn, who had held

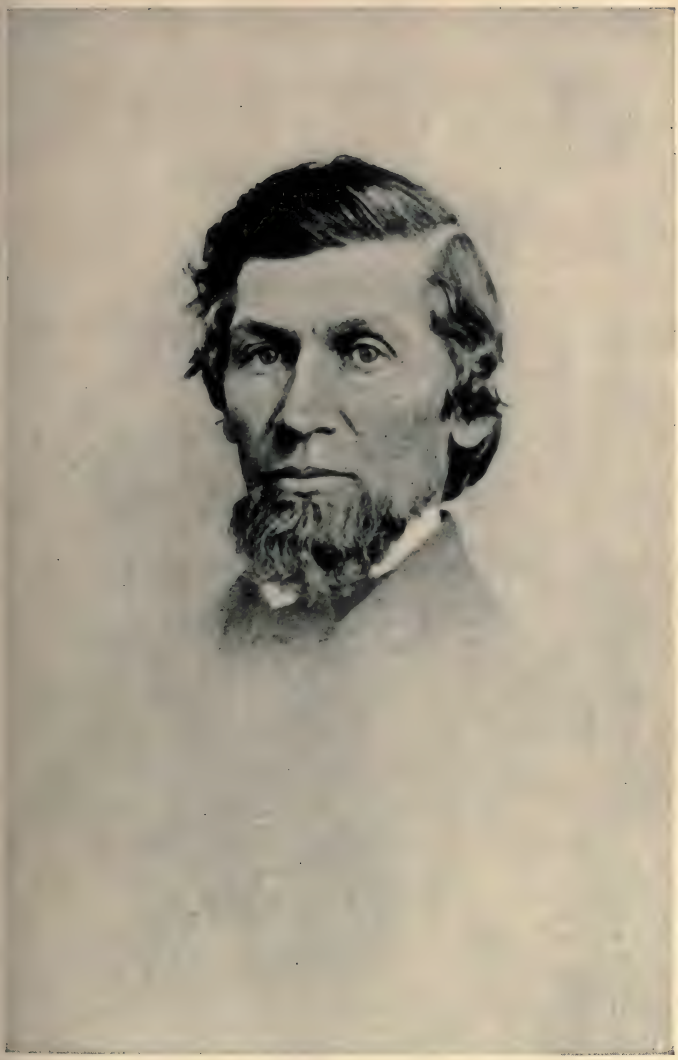
that office in the State Agricultural Society. As there had been a legislative understanding that the practicability of placing the engineering branch in Chicago should be canvassed, its location there was authorized on condition that no part of the University's existing funds should be used for its establishment or maintenance,—a condition which effectually quashed the ambitions of certain mechanics' organizations in Chicago. Proceeding to the election of a Regent, the Board voted upon the names of Daniel Pinckney, of Ogle County, J. L. Pickard,[1] of Chicago, and John M. Gregory, of Kalamazoo, Michigan. Prof. Turner had refused to let his name be used, fearing lest his purpose in his long advocacy of the institution be misconstrued.

The balloting quickly resulted in the choice of Dr. Gregory. The man thus elected was popularly little known in Illinois, but he had spoken in Chicago, where he had impressed some Trustees with his alertness to the industrial movement, while he had a sound reputation in academic circles of the Middle West. He was net yet forty-five years old. Born in northern New York, he had been educated at Union College under Eliphalet Nott, and after studying law for several years, had entered the Baptist ministry. Later he became the head of a classical school in Detroit; in 1856 he established the *Michigan Journal of Education,* which he edited; and three years later he was elected State Superintendent of Public Instruction. After serving three terms, in 1864 he accepted the Presidency of Kala-

[1] Josiah L. Pickard had a career of considerable importance in the educational history of the West, and possessed abilities that quite justified his candidacy for the Regency. He was at different times State Superintendent of Public Instruction in Wisconsin, superintendent of the Chicago schools, and President of the University of Iowa, which he capably served for nine years ending 1887.

mazoo College. He was proposed to the Board by Thomas Quick, to whom he had already given a promise of acceptance. A man of great energy, he was also a man of intense belief in certain ideas, among which was practical education. He was well versed in the classics and theology—subjects indispensable to the old-time college president. But he was also interested in new institutions and new doctrines; a man who loved to travel, to mingle with society, and to speak; and one who would devote himself to any enthusiasm. His talents were quick, mercurial, and ready, rather than solid, and yet he had the requisite determination and persistency. It was eloquent of his energetic character that while far from being a man of striking personal appearance, for he was slight, short, and without distinction of head or carriage, while at work or speaking he seemed impressive to his companions.

Undoubtedly Gregory's prominence in Baptist circles assisted his election, for Baptists numbered a large proportion of the Trustees. One was the Rev. Mr. Burroughs, President of the old University of Chicago, which Stephen A. Douglas had been instrumental in founding a decade before; six others were active churchmen, three being clergymen. The nominator, Thomas Quick, was head of a small Baptist school. It is little wonder that the election left some Trustees apprehensive lest sectarianism figure in the future of the University, and that outsiders shared the fear. The farmers were especially displeased that a minister had been chosen to preside over their highly practical Industrial University. Turner, who had never hesitated to express his dislike of "old hunker presidents," groaned: "O Lord, how long, how long? An ex-superintendent of public instruction and a Baptist preacher! Could anything be



REGENT JOHN MILTON GREGORY

worse?'' But no better man could in reality have been chosen.

Dr. Gregory, upon surveying the field, was at first inclined to withdraw his promise to serve,[1] but finally consented on condition that his salary be raised to $4,000. He automatically became chairman not only of the Board but of the important committee on course of study and faculty, so that from the beginning his was the guiding hand.

The Regent was thus at once confronted with the most difficult of problems—that of drafting a curriculum and organizing a teaching staff so as to lay the foundations of a broad University, and yet please those who insisted upon emphasizing industrial knowledge. Fortunately, his committee-associates were able and broad-minded. They were Newton Bateman, a graduate of Illinois College and head of the new school system of the State—the virtual founder of public elementary instruction in Illinois; Mason Brayman, a scholarly lawyer who had revised the State code; Willard C. Flagg, a college graduate and practical farmer of wide reputation; and S. S. Hayes, a Chicago lawyer who, in the constitutional conventions of 1847 and 1870, did much excellent work in shaping the fundamental law of Illinois. These, with Horatio Burchard, later director of the Philadelphia mint, Emory Cobb, J. O. Cunningham, and John M. Van Osdel, a Chicago architect, were the fittest men on the Board. Had members like M. L. Dunlap or O. B. Galusha, farmers of strong personality who had done much to help Turner carry through his program, been in the majority, Gregory would have

[1] "Sober second thought," he says in his Journal, gave him an unfavorable impression of the prospects of the University. Mr. Quick had been interested in the short-lived agricultural college at Irvington; *Prairie Farmer*, June 20, 1868.

found it hard to give effect to his liberal views. For he was determined, as he said, that no "one-sided education" should restrain "an institution which is to last through coming ages" and which should "educate for life as well as art."

The report of this committee, as accepted at the Board meeting in May and ordered printed, bore few earmarks of a compromise. Full advantage was taken of the fact that liberal education had always had many exponents in Illinois, and that the rigid conceptions of Turner had passed through several permutations before their expansion into the Morrill Act. There was, of course, complete legislative warrant for a broad curriculum. The Morrill Act had stated that the leading object of the University should be to teach the branches related to agriculture and the mechanic arts "without excluding other scientific and classical studies"; and this clause had been repeated in the State act of location. The committee admitted that the prevalent view was that the scientific and classical studies were simply permitted, but it itself preferred to believe that the intent was that the liberal studies *should not be excluded.* The design of Congress, it asserted in contradiction to the view of Turner, Dunlap, and others, was not to establish a wholly new sort of higher institution, but simply to extend much wider the benefits of science and liberal culture. Aware that its action would arouse a storm of protest, it allotted almost as prominent a place to general science, to trade and commerce, and to literature, history, and philosophy as did any college in the Middle West.

Turner and his associates, indeed, had very definite ideas as to the bent the University should take, though they had failed to have these ideas distinctly formu-

lated in the State act of 1867. The sturdy old professor-farmer had hoped to see planted at Springfield or Jacksonville an institution which should offer practical courses, and little or nothing else, to resident students of scant preparation; and which should unite investigative activities with those of modern extension work. As he told the Monmouth County Fair in 1866, he wished to see experiments in all arts made annually under direction of the Trustees by county superintendents appointed and controlled by the University, to which annual reports should be made. The same thing, meanwhile, should be going on in other States, so that the whole Union would eventually become one vast experimental farm; and while producing one crop for present wealth, should evolve scientific knowledge from year to year, to be diffused over all classes of society. This was in every way a noble conception, with features calling to mind the present national system of engineering and agricultural experiment stations; but one impossible in the undeveloped state of scientific agriculture and to infant institutions of learning. It is true that the Legislature's petition in 1853 for a land grant to each State for industrial education had suggested that the new universities should give "a liberal and varied education, adapted to the manifold wants of a practical and enterprising people"; but the context of this phrase makes it evident that the general interpretation of "a liberal education" was as a more practical and scientific one.

And in all his speeches Turner said no words friendly to the inclusion of the liberal branches in the Industrial University, and did much to confirm the prejudice against them. He thought that "the professions have been studied till trifles and fooleries have been magnified

into matters of immense importance." At Griggsville in 1850 he lashed out at "those species of organized ignorance found in the creeds of party politicians and sectarian ecclesiastics." His first plans stated that the addition of a distinct classical department would depend upon expediency, and that it would probably be best to make practicable arrangement for leaving it to existing colleges. At any rate, it should only be attached "in due time." Repeatedly he had spoken as if there were an abiding cleavage between practical and literary education, as he believed there was between the whole interest and destiny of the industrial and professional classes. The institutions designed for the one could not meet the wants of the others. Satan had "in all ages . . . put darkness for light" and seen to it that the workers had been denied the higher education to which they were entitled; and at the same time had given the professionally employed a "hotbed process" of training which was wrongly dignified by the name education. " The old curriculum," he wrote, as the University's plans were shaping, " is as absurd as the monkish learning." [1]

Yet Gregory's committee on course of study boldly proposed not only the Agricultural, the Polytechnic, and the Military departments, but one of Trade and Commerce, one of Chemistry and Natural Science, and one of General Science and Literature. The distinction between the last two is interesting. The former was to be a course in applied science—as the application of geology to mining, or of chemistry to agriculture and manufac-

[1] See the addresses of Turner at Griggsville, 1850, and the Granville Convention, 1851, the Memorial of January, 1853, and letters in the Turner MSS.; Mrs. Carriel's "Life of Turner"; E. J. James's "Origin of the Land Grant of 1862"; Report of State Horticultural Society, 1868, p. 171ff.

turing; together with extended investigations in chemistry, geology, and natural history. The latter embraced pure sciences and mathematics. The division was awkward, and it may be guessed that the inclusion of some science with the literary studies was undertaken to make the latter more palatable; for in this last department were also the classical languages, philosophy, English, and political economy—or, as the report put it, the linguistic and philological, and philosophical and speculative, sciences. Students of horticulture and agriculture were to be allowed to complete their full course in three years, the others in four. The committee suggested a division of the faculty among professors, assistant professors, lecturers, and tutors.

Men like Turner and Dunlap did not object to the live languages, for they granted the argument that scientific farmers should be able to use French and German, while the wide use of these tongues in America made them of additional value. But Turner had declared himself against a "dead literature," and had written with glee when the Royal Commission of 1850 of which Goldwin Smith was assistant secretary assailed Oxford and Cambridge: "If the slow-molded Englishmen begin to find out that they have been humbugged in that system of education . . . will not the lithe, agile, and wary Yankee find it out too?" A classical teacher he declared enough to stultify a whole generation of boys, and he termed ridiculous the extravagant claims set up for the classics as mental discipline. Many of the farmers completely distrusted these languages, as they did philosophy, logic, and even economics. When the committee demanded a place for Latin and Greek as vehicles of science and scholarship, and main constituents of the modern tongues, the protest was instant.

What a course! proclaimed many hostile newspapers, especially of the cities disappointed in the University's location; French and Butler's Analogy, Cicero and inductive science, Homer and mental philosophy! "Why did not these astute committeemen include crocheting, embroidery, and lessons on the harp?" These alleged heresies, wrote one Trustee, aroused "to madness many so-called friends of industrial education. . . . The institution was denounced as no more than one of the old colleges, and the question was derisively asked, 'Why add by a grant of public lands to these old institutions, of which the people already have too many?' Charges of willful betrayal of trust and of gross perversion of funds . . . were freely made against the Board, and rung with irritating changes by newspapers throughout the State for months."[1]

The State act of 1867 had left the way open for a modification of Turner's plan for lodging in the University wide experiment-station and extension-teaching functions. In a sketch of a model charter made in 1865 he had provided for a corresponding secretary to oversee the experiments made in each county, issue instructions and materials to them, and collate their reports. The law which commanded the appointment of other University officers left the choice of the secretary optional; and the Board hastened to show its good will to the industrial enthusiasts by choosing Willard C. Flagg to the position.[2] He had no directions for his work,

[1] The Chicago *Tribune* led in these attacks. The Aurora *Beacon* added some words on the faculty: "Good enough men in the proper place—all strangers—not one of our own well-known men, *well educated* in what *we want taught*, are called." January 2, 1868.

[2] This led the Jacksonville *Journal* to remark: "It would seem that the Trustees are coming to the conclusion that in order to be successful the instructors of the institution . . . must

aside from the legislative requirement that he should issue circulars and report annually on the progress of the institution; and he had to make it what he could. This proved to be little. But in advance of the University's opening, he sent out letters asking the farmers an account of their experience with crop rotation, manures, deep plowing, and different varieties of stock, so that something might be learned of the best agricultural practice. The answers are printed in the first annual report. For the rest, Gregory and his fellows held their ground. In May it was determined that the University should begin work the first Monday in March, 1868. Some Trustees wished an earlier commencement, but it was pointed out that a library and apparatus must be acquired, a faculty chosen with care, and some interest realized on the proceeds of the sale of scrip for 180,000 acres of land and $20,000 worth of Champaign County bonds, which the Board had just authorized. The University, above all, must be given a better advertisement than that accorded it in the attacks of its enemies, conditions of admission made clear, and definite information upon the courses diffused.

This second or May meeting of the Board was held in the chapel of the Urbana and Champaign Institute, and gave many Trustees their first opportunity to see the University's plant and environment. Their impression must have been discouraging. Urbana and Champaign were then mere hamlets upon a prairie not more than half occupied by farms. Not more than one short street was paved then or for twenty years afterwards, and only a few were even graced by pine or oak sidewalks.

have at least some hastily gathered knowledge of agricultural matters, as well as ability to preach sermons and teach Latin and Greek." January 18, 1868.

The majority of the buildings were of the cheaper grades of lumber, scarcely a half dozen in the two towns being of brick. Stock of all kinds ran at large in the streets, as in the country near by, and the residences had to be securely fenced against its inroads. The public ways were littered with woodpiles and unused wagons. There was no general water system, and outbreaks of typhoid were frequent. Five or six churches served the two towns, and two small schoolhouses. All the territory to the east, south, and west of the University grounds was unoccupied by buildings, and most of it was virgin soil; while to the north ran only a sparse line of houses connecting the Twin Cities. Between the two was a single street railway line, provided with a single car, which at intervals of two hours was hauled bumping by a team of mules across the mile-and-a-half stretch—the fare ten cents and the passengers few.

The building in which the University was to be housed was a five-story structure, with a four-story addition to the south, was 125 feet in length, and stood commandingly on the bare prairie, high above everything in the towns. The entrance faced the north, near the line now marked by Clark Street, while a side door opened on Wright Street. It had as yet been roughly finished, these doors opening directly upon the ground level, and a Trustee remarked that it looked like a stake driven into the ground. Entering, the visitor was confronted by an ugly staircase that wound up from story to story. The main portion contained recitation and dormitory rooms; while in the wing were more recitation rooms, a refectory, and on the upper floor a chapel. No bushes or trees stood near; débris was scattered about; the only paths were the trespassing tracks of teamsters. The immediate campus comprised ten

acres, so marshy that for years later the faculty and students wore rubber boots in crossing it in winter or spring. Burrill Avenue was a cowpath, the Boneyard a creek in a pasture, the site of Green Street decorated with old-fashioned rail fence and stiles. The quarter-section later to be known as the "experimental farm" lay a little over a half mile to the south, with a forty-acre tract, half a mile long and not owned by the University, between. The Busey farm, University property, lay over a mile in the same direction, and the Griggs farm, also University land, to the southeast two and a half miles. The rounding out of the University's domain was a plain need.

The attitude of the towns towards the University was well indicated in the favorable issue of the struggle for ratification of the contract which had been made by the County committee for a University endowment. This contract was informal, and had to be approved by popular vote; an adverse vote would again leave the institution to be contended for by other cities. A spirited campaign during March and April was enlivened by a bitter quarrel between some citizens and Dr. Scroggs, a member of the Board; while it was thought that Jacksonville and Bloomington were lending assistance to those who wished to defeat ratification. A series of meetings in the various towns and the country schoolhouses, however, brought out a large majority in favor of the required bond issue, and showed that the citizens were willing to make sacrifices for the institution and hoped much for its development. Final confirmation of the location was delayed to the end of the May session by the Trustees, some of whom complained that the exact letter of the county's contract was not fulfilled. Thus it had offered ten acres of ground around

the Institute, and there proved to be a little less. The quarter-section it had described as "adjacent" was a half mile distant. But the Legislature had seen and understood the location of the lands, and the objections of the reluctant members—notable among whom was President Burroughs of Chicago University—were overruled; Burroughs himself finally offering resolutions in praise of the "noble liberality" and the "promptness and good faith" of the county.

During the summer the grounds were enlarged, and alterations and improvements undertaken in the building. It was given a new front entrance on the second floor, with changes to make that floor the principal one, and the lower one, later the chemistry laboratory, the basement. A flight of stone steps was constructed, and surmounted by attractive white-painted pillars of wood, while Dr. Gregory threw a number of rooms together above this entrance to form an office and anteroom. A sewer was constructed to the Boneyard, outbuildings were erected, the grounds fenced against stock, and preparations made for sowing grass on the mud. For these and other purposes money was obtained by an ingenious arrangement. Though a part of the land scrip for 480,000 acres had been sold, the Morrill Act forbade the use of the proceeds except for endowment. It was therefore ordered that these proceeds be invested in Champaign County bonds, and that, as the University already held $100,000 worth of these bonds, the scrip be used to buy them from the institution itself. During the summer of 1867 Dr. Gregory, by instruction of the Trustees, traveled in Minnesota to aid in surveying the University lands, locating there about 16,000 acres; while a companion went on to Nebraska. In the autumn the treasurer was

directed to sell $20,000 worth of bonds, and 100,000 acres in scrip at not less than 90 cents an acre.

Dr. Gregory's early return was prompted by his desire to defend and advertise the University, the county fairs of September and October giving him an excellent opportunity to speak. He also delivered an address before the State Fair, at Quincy, which was widely reprinted. Elsewhere impromptu talks were given from the rear end of a farmer's wagon, and inspired more than one young man. The hostility evinced in the spring had by no means abated. The Regent enumerated a few months later the three classes of error which he found most current among the prejudiced or uninformed. One consisted in the assumption that since the University was founded mainly for those from the farming and manufacturing districts, it should give its students the high school training for which no provision was yet made in many such communities. Another lay in the belief that the University was designed exclusively for the education of children of the industrial classes, and planned exclusively to keep them in their fathers' callings. The most important was the bigoted conception which a very numerous class entertained of practical education, so extreme that they were ready to denounce anything that reflected a broad view of human effort. All attention given to the liberal and especially the "elegant" studies seemed to them a waste of time; and they insisted that youth should study things and facts, "forgetting that the mind admits nothing but ideas." A belief of different sort but quite as unfavorable, and hinted at even by Gov. John M. Palmer, was that schools of special education, supported by the common treasury, were an injustice to the great body of the people, who could derive from them only an uncertain and remote advantage.

Dr. Gregory fought in his gallant way to dissipate these misunderstandings, his ready logic and frank, persuasive speech serving the University well. At the same time he carefully explained the real idea of the institution, and drummed up prospective students from farm and town. He was assisted by a system of prize scholarships which had been proposed, one to be supported in each county by an endowment locally raised; for these competitive examinations had been provided, and examination papers were received from most counties.

The most effective of the critics of the University was the Board member, M. L. Dunlap, a close neighbor of it and well known as a farmer and orchardist. Conducting a column in the Chicago *Tribune* over the name "Rural," he had wide influence as a writer on agricultural topics. During the fall he began a damaging campaign of criticism. His motives some thought unworthy; they believed him peevish because his views had not received greater deference from the Trustees, and because he had not been offered a lectureship in agriculture. But there is no real evidence that he was anything but sincere in his attitude, and he had many companions. He had been thwarted by the Board in his desire to see Daniel Pinckney made Regent, and he was alarmed by the choice of Gregory. He had been thwarted again when he proposed an early opening, and when he moved that women be admitted. As a practical tiller of the soil he, who had furnished the University $2,000 worth of horticultural material, was outraged by the proposed curriculum. Against this he drew up a severe indictment, and ridiculed ancient history, Butler's "Analogy," and Paley's "Evidences of Christianity" unsparingly. When some newspapers pointed out that these studies and readings were merely optional,



THE ORIGINAL BUILDING

he turned to attack the vagueness of the agricultural program, refusing to be reassured by the fact that definite topics of instruction were named, and asserting that nothing like three years' useful work would be offered. He was much echoed, especially by the State Horticultural Society, which at Urbana-Champaign itself had in 1866 uttered implied threats against those who did not fall in with its narrow views as to the new education.

The inaugural ceremonies took place in the chapel on March 11, 1868, in the presence of the Trustees, distinguished citizens from all parts of the State, and a large number of townsfolk. Hymn and prayer were followed by the University anthem composed by Dr. Gregory:

> We hail thee! Great Fountain of learning and light;
> There's life in thy radiance, there's hope in thy might;
> We greet now thy dawning, but what singer's rhyme
> Shall follow thy course down the ages of time?

An address was made by Newton Bateman, State Superintendent of Public Instruction, laudatory of the work of Turner and of the whole plan of industrial education. Receiving the keys of the University from Gen. Hurlbut, Dr. Gregory then spoke for nearly sixty minutes. "I should be something more or less than human not to feel the solemn pressure of this hour," he began; and he impressed his hearers with the sense that he appreciated his responsibilities. He felt that the University was the child of a great popular movement, and that it was its duty to strike a new road in practical education. But with tacit allusion to men like Dunlap, he emphasized the fact that no narrow education would do. "It is but just to agriculture itself and to the industrial arts that their students should be aided by all that refines or

strengthens the mind, and that their educated representatives should be the peers of the most soundly cultured men in the scope and value of their learning. We have an ambition to send forth to the great industries of the world, not men who are puffed up by some little smatterings of science, but clear-headed, broad-breasted scholars, men of fully developed minds—fit leaders of those great productive arts by which the world's civilization is fed and furnished."

Instruction had begun nine days before, with an enrollment of about fifty young men—this number being disappointingly small, by reason of the wide abuse of the University. One-third of a University year was considered to remain, for three twelve-week terms had been fixed, fall, winter, and spring, ending early in December, March, and June respectively. Two model courses, one in agriculture and horticulture, and one of a "general educational" nature, had been adopted, but a wide latitude was allowed in the choice of studies. The arrival of late-comers finally brought the registration to seventy-seven, but of these forty-five were from Champaign County, and most others from the eastern section. During the first weeks instruction was given by three teachers, Dr. Gregory, Prof. Wm. Baker, and Prof. George Atherton, in addition to whom there was the head farmer, Jonathan Periam, who was later, as head of the *Prairie Farmer*, to become a leading agricultural editor of the Middle West. But Dr. Gregory's time was largely consumed by his administrative work, and by the frequent speeches he felt it his duty to make elsewhere, and he was obliged to seek a new instructor. Consulting a local Trustee, Judge Cunningham, he was informed that the Urbana schools had just closed, and that "perhaps the principal, Mr. Burrill, will take the

place." Burrill, a graduate of the State Normal University, was sought before he could leave town, and began as assistant professor a connection that was to last nearly fifty years. Even yet but little of the projected program could be realized—some courses in natural history and mathematics under Burrill, in English under Baker, and in history and Latin under Atherton. Atherton was also the first teacher of military tactics, and had the entire enrollment for awkward squad. There was no uniform, and the motley headgear in particular tried the heart of the drillmaster, though he refrained from complaining, for he knew how poor were most of the boys. One unhappy wight presented himself at drill one morning in a high silk hat, which was bowled to the ground at the feet of the professor when his neighbor presented arms. Atherton with difficulty concealed his wrath, and thereafter the boys were ordered to wear "some kind of a cap."

In the autumn a much better showing was made. For this term five new teachers had been procured: Lieut.-Col. S. W. Shattuck, a Civil War veteran and assistant professor of mathematics and instructor in military tactics at Norwich University in Vermont, was brought out for the same positions at a salary of $1,200 a year; J. W. Powell[1] had been made professor of natural history and geology, and granted a $600 salary for the summer while on an exploring trip in the Rockies, but could not return; Willard Bliss, of Nokomis, Illinois, was made professor of agriculture at $2,000 a year; A. P. S. Stuart, of Harvard, became professor of chemistry at the same salary, and Capt. Edward

[1] Prof. Powell was the noted Major Powell, later explorer of the Grand Canyon and Director of the United States Geological Survey.

Schneider, as the first catalogue called him, an Austrian Pole who had been educated at Lemberg and Vienna and who after an adventurous life, fighting at Solferino and Magenta and throughout our Civil War, had settled down to teaching at Carlinville, was brought as instructor in German and bookkeeping. The Regent remarked proudly that the faculty "without exception came from the laboring classes. They were all trained in boyhood to hard labor, and by their own industry won the education that enables them to teach others. Becoming educated men, they have not ceased to be practical men." It was fortunate that they were inured to hardships and hard work, for they had plenty of both on that bare prairie.

A considerable number of youths who had expected to enter the previous spring, but did not, appeared in the fall; and the total who matriculated during the autumn and winter was 136. The entrance examinations still covered only the elementary subjects, and many came with the frank intention of staying only one term or one year to supplement grammar-school work. They thus engaged in what were properly preparatory courses, though studies were now offered in history, English, chemistry, agriculture, botany, mathematics, bookkeeping, and modern languages. During the winter Edward Eggleston, the novelist, was engaged to lecture on literature. The Regent stated that so many students were in secondary work that the proportion electing strictly industrial courses could not be determined. But it was believed that nearly one-third hoped to take up agriculture, and a number of others mechanical or commercial training.

Despite the patching-up of the Institute building, the University remained greatly hampered for room. A

chemical laboratory was opened at a cost of $2,500, and a building was erected for a mechanical shop, part of which was used as a stable. During the second year the first greenhouse was built. But better mechanical quarters and equipment, a drill hall, and above all a hall for recitations and general purposes were urgently needed. The University was constrained to place library and museum, recitation rooms and dormitory rooms, laboratories and administrative offices, under one roof. The resultant confusion was great. The students were not unknown to come down to recitations in bathrobe and slippers. Prof. Stuart suffered especially in having to carry on his experiments in small, badly-lit, and damp basement rooms. Drill in winter was impossible. And the building itself was none too good, having a roof which leaked until it was wholly replaced. In the spring of 1870 the University voted $2,000 for a drill hall, but it proved impossible to erect one for that sum.

The University could not be fully launched until Gregory had in some measure overcome the prejudices prevalent against it. One important step towards their reduction was taken in the conversion of Dunlap at the Trustees' meeting in the spring of 1868. The other members, Gen. Brayman at their head, thought it intolerable that an active Trustee should criticize the University upon policies to which he had made no particular objection when they were launched. They unanimously adopted resolutions denouncing his attitude and demanding that he furnish an explanation to an investigating committee. He tried to justify his course, and the committee at once reported in favor of his dismissal from the Board. Thereupon President Burroughs, a close friend of Dunlap's, made an appeal to him in the presence of the Board; and he yielded to the majority

opinion and promised to treat the University with greater courtesy. At the same time, a mass meeting in Urbana adopted resolutions in support of Gregory and his plans for the University.[1] But this was only a first step, and the criticism among horticulturists and agriculturists continued to be pronounced. The instruction at the University was belittled and misrepresented, and its removal to some more favorable place demanded. Finally, the Legislature of 1869 adopted alarming resolutions. Whereas, they ran, complaints were being made in all parts of the State that the Industrial University "is being diverted from the leading objects for which it was established, and is practically conducted on the basis of an ordinary classical school," it was necessary to reaffirm that its essential objects were "the teaching of such branches of learning as pertain to agriculture, horticulture, and the mechanic arts," and to direct the Trustees to adopt and enforce such regulations "as will peculiarly adapt it to the educational wants of the students who may look forward to the adoption of farming or mechanics."

All this, as Gregory and his assistants knew, was highly unjust. In the catalogue of the University issued in the spring of 1869 an enlarged statement of the courses was prepared specifically to combat the injurious misapprehensions which, it was admitted, had grown out of the former announcements. The changes were

[1] All record of the resolutions concerning Dunlap was expunged from the minutes of the Board. The Champaign *Democrat* states that the discussion of Dunlap's course was begun March 10, and not concluded till March 12, after one session lasting till two o'clock in the morning. The mass meeting was held March 10, and the preamble to the resolutions adopted stated that "it has come to our knowledge that a small minority of the Board . . . differ from the majority and from the Regent in regard to the management and course of study adopted. . . ." This was at the very time the University was being opened.

designed to show that special prominence was given the branches of learning related to agriculture and the mechanic arts. The Regent's report to the Board a year later made tacit reply to the Legislature. It had been the constant aim of himself and the faculty, he said, in obedience not only to the laws but to the wishes of the Trustees, to give the University the character indicated by its name and by the Morrill Act. Without refusing instruction in other studies to those who desired it, they had seen that all had taken some of the branches relating to agriculture and engineering, and the records showed conclusively that the tide of undergraduate sentiment set towards the industrial pursuits. No instance was known in which students had been diverted from the industrial studies to the professions, but there were several in which men had given up ambitions for the bar to take to farming. If this could be said when the farms, orchards, and shops were only half developed, and the classes largely engaged in high school work, what might not be hoped of the time when the University had reached a fuller development?

The climax of the fight came when, in the spring of 1870, delegates of various agricultural societies met in State convention at Bloomington, with the avowed purpose of arresting further abuses in the disposition of the University funds, and of having it removed where they might keep a watchful eye over it. The alarmed Gregory, on the day set, headed a delegation of the faculty and most substantial citizens of the towns to the gathering. The meeting had only been organized in Bloomington when the Regent obtained the floor and launched into a defense of the University's work. He explained the adaptability of the course to the objects of the new educational movement and called attention

to the legal provisions against exclusion of the classical studies. This, according to a Trustee present, was to many of the delegates a revelation of the true intent of the University. They had supposed that legally it was only an agricultural college, for by this name the University was usually called; that for the industrial classes alone—and by this they generally understood the farmers—was the land grant made. The effect of the speech was all that could have been hoped. Some courteous questions were asked the Regent, there was a temperate discussion, and a committee was appointed to verify his statement.

The report of this body, made at the State Fair in Decatur the following fall, was a complete vindication of the University. The committee had found, in its visit a few days previous, about 200 young men in attendance, 50 of whom were taking agricultural courses, 50 mechanical, and 65 work in chemistry. Only 20 had elected Latin, and none Greek, and as each student carried three subjects, this was thought an excellent showing. The visitors were also pleased with the personality of the Regent, and forgot that he was a minister in accepting his assurances that he was trying to make the University something much more practical than the ordinary college. Their sole criticism was that the model farm was not in a creditable condition, while no sufficient provision had been made for farm experiments, and the industrial and economic statistics of the State were not being properly collected. In adopting this report the convention not only approved of the apparent progressiveness of the University—stating only that it thought it more important to discover new knowledge than to teach old—but appointed five men to enlist support for the institution. The vindication practically

ended the harsher criticism and greatly strengthened the school, one direct result being that many farmers came to visit it and see for themselves. Meanwhile, in March, 1870, the Board had already defeated a direct effort by four Trustees to obtain the acceptance of a course of study omitting Greek and Latin.

The alteration in the State's attitude was demonstrated when in 1871 the Legislature, in response to an appeal from the Trustees, authorized a new University Hall, to cost $150,000, and appropriated $75,000 for beginning it. This was an immense gain, for it enabled the University to advertise in its next catalogue that it would soon have room for 1,000 students, with a large chapel, library, museums, drawing studios, thirty class and lecture rooms, and several rooms for literary societies—all under one roof. Money was also granted ($25,000) for a two-story battlemented mechanical building and drill hall, with towers of three stories. During the summer contracts were let, plans drawn, and work commenced, making it possible to publish a projection of the two buildings in the catalogue of 1871. At the same time Gregory reported progress in the numbers and qualifications of the students. The attendance during the first full year had averaged 150; during the fall and winter of the second it leaped to about 215, so that some were housed in the basement and the eight recitation rooms were overtaxed. The students represented a much wider area of the State, and more came with the expectation of staying three or four years. The University seemed to be gaining its feet.

In 1871 Gregory was for the third time elected Regent, and for the first time unanimously and without debate. His administration had just nine years to run. During these nine years he was as completely the ani-

mating force of the University as he had been in launching it and setting its course. Filling the two chairs of history and the social sciences, and philosophy, he delivered two courses of lectures each term. He guided the development of each college, advised with the faculty, attended to the discipline of the students, and tried to imbue them with his own ideals of character and education, by giving almost daily short lectures in the chapel. "It will never be known," wrote one alumnus many years later while Mayor of Kansas City, "how far-reaching was the effect of these chapel talks." Similar speeches on larger themes, given every alternate Sunday afternoon, attracted the townspeople. His abilities as an orator served the University well outside, and he tells us that in its interests he made in those nine years hundreds of public addresses to conventions, institutes, societies, and high schools, often traveling at night that he might be at his desk again in the morning. His interest in educational affairs frequently carried him East, and he became so well known that Daniel Coit Gilman once visited him at Urbana. Besides a voluminous correspondence, he wrote many reports for departments of the State and national Governments, and for Congressional and legislative committees. Three times he visited Europe on business primarily for the University or State, always at his own expense.

The struggle he had to carry on for better State support, the constant efforts to elevate standards of entrance and instruction, the contrast between the weak resources of the University and those of other State institutions, frequently discouraged him. Clark R. Griggs thought that he was deficient at times in the buoyancy and optimism needed to inspire greater energy in some of his colleagues. His constant labors were alone

enough to break down the freshness of his outlook, and his relations with his co-workers sometimes gave him great care. First there was J. W. Scroggs, a Trustee who always addressed him by the disrespectful title of "Doc"; then Dunlap; then Dr. Manly Miles, who, becoming a non-resident professor of agriculture in 1870 and holding a resident professorship in 1875-76, was a thorn in Dr. Gregory's flesh much of the time. Certain politicians feared and disliked the Regent. "Rural" persisted in milder criticism, and was followed by others who thought the University ought to devote itself to turning out a sort of glorified farm hand. But Gregory never lacked the enthusiasm which took him out over the State to represent and plead for the institution, and in the six months preceding his resignation alone he made forty speeches.

The attendance during these nine years under Gregory increased gradually but steadily. Everything possible was done to make entrance easy. The requirements were first fixed to cover merely grammar school studies, and when they were increased a preparatory year was included. The first catalogues advised students uncertain of their ability to write for advice—and, we may be sure, for encouragement. Expenses were almost ridiculously low. Each student from Illinois had to pay ten dollars for matriculation, and if he held no scholarship, $15 a year in incidental fees; room rent in the unfurnished dormitory was $12 yearly, and little more outside, and board could be procured for $2.25 a week, while some students brought potatoes and corn-meal and cooked their own food. In all, strict economy would result in the reduction of living expenses, exclusive of clothes, to $100, and the University asserted that most such expenses could be met by work.

"Some students pay their way and have money to spare." Argument was employed: youths were told to "come without fear" and some place would be found for them, and that no sacrifice was too great which would enable a man to take a place among the leaders of his generation.

The average number of students from 1872 until 1880 was about 350. The admission of women to the University in the fall of 1870—an innovation which Dr. Gregory thought of very doubtful wisdom, but which quickly justified itself—was responsible for the presence, in general, of 75 or 80 of these. The panic of 1873 had an unfortunate effect upon attendance, but the University had recovered by 1878, and in 1879 and 1880 registration went above all previous marks, the enrollment reaching 434 in the spring of the latter year. It must be remembered, however, that the preparatory department for these latter years registered over one-fourth of the entire attendance. And as compared with the totals of students, the rolls of graduates were pitifully brief. Few completed their courses. After 1874 they varied in number annually between 23 and 42, and by the end of 1880 the total of graduates was about 250, or one-sixth the whole matriculation. Of those who did not remain during the four years, an overwhelming preponderance stayed for only two or three terms.

As discouraging to some as the failure of the students to finish was their failure to crowd unanimously into the practical courses which the press and farmers' institutes, Legislature and University catalogues, were continually exhorting them to elect. Except during scattering terms, the college of literature and science boasted the largest registration throughout Gregory's administration; and if the college of engineering was

already beginning to show the vigor it afterwards possessed, this was offset by the lamentable condition in which that of agriculture remained. In 1873-74 it was possible to show that there were more students in engineering than in any other course, but this was done only by separating the registrants in the college of literature and science from those in the so-called "eclectic" course, which was one in the liberal arts, and included most of the women. Even so, agriculture made a bad third. At the end of the year 1875-76, the Regent had to report that while there were 193 students in the college of literature and science, there were but 73 in engineering and 45 in agriculture. At the opening of 1879 there were 149 students in literature and science, 74 in engineering, and only 23 in agriculture. With five students in the "elegant" branches to every one in agriculture, it is no wonder that the rural leaders looked with little kindness upon the University. Gregory, as he protested, did all that was possible for instruction in agriculture, and for a time had hopes of 250 students in the subject. He emphasized it in every catalogue and circular, and every speech to prospective students; more money was expended in it, more teachers employed in it, than in any other.

The reasons for the weakness of the agricultural college were multifarious. Dr. Gregory thought, for one thing, that it would require time for it to take root—the agricultural schools in Europe had existed for a quarter-century before they became strong. He also believed that it suffered from the weight which tradition threw on the side of classical education—that the people were reared to look upon college as leading naturally to the learned professions. His successor, in entering office, propounded another explanation: the

fact that there was no demand for graduates of an agricultural college, whether as teachers or farm managers. An advertisement in the farm papers would bring no better offer than one of $25 a month as farm hand; while men of liberal education could teach or enter business, and engineers go into technical work, at from $100 to $175 a month. The only matriculants, therefore, were those who intended to take over their fathers' farms. Neither quite admitted what was an undoubted fact—that at that time no real science of agriculture, capable of furnishing substance for a four years' course, had been developed, and that there was as yet no technical education that was a necessity to the progressive farmer.

In consequence of the low registration, by 1880 it had become customary in the West, while referring to the schools of agriculture in Michigan, Kansas, and Mississippi as unqualifiedly successful, to rank that of Illinois among the failures. There was some truth in this, but also some injustice. In the former schools the courses lay close to the elementary studies in nature, and students were more freely admitted; while they were schools of general science and counted their scientific students under the term "agricultural." The school of Illinois was of a specialized nature, and though it was not reaching the great farming population, it was developing an actual technical offering of comparative respectability.

For some years the University granted no degrees, since it was thought that industrial education would be better distinguished from the older form by the mere granting to each student, no matter if he had attended but a single term, of a certificate setting forth the work he had completed and his standing. But those who left

the University found themselves handicapped by the fact that they could not claim the letters that are the universal symbol of a university education; and a petition to the Legislature resulted in a change in the law in 1877. Yet the Trustees still hesitated, announcing that they thought degrees valueless in themselves, and so easily gained as no longer to distinguish the scholar from the charlatan. They would yield only if the alumni seemed rooted in their prejudice. As a result of this controversy, a conference of the land grant institutions was held at Columbus, Ohio, and as it was shown there that all but Illinois were already granting degrees, the Trustees permitted the class of 1878 to receive them.

The slowly growing enrollment under Gregory implied an equally slow growth in plant and equipment. The mechanical building and drill hall for which an appropriation was made in 1871 was ready that fall. But University Hall stopped abruptly when its walls were half built, for the Legislature of 1871, pressed for money, adjourned without appropriating the $75,000 necessary to complete it. As what was built would soon have gone to ruin, the Board completed the building by the sale of $60,000 worth of Champaign County bonds, properly a part of the endowment—a white streak across the west end still marking the point where construction had halted. The principal address at the dedication in December, 1873, was made by Gregory, as that at the laying of the cornerstone had been delivered by Turner, who seized the opportunity to confess that his fears for the institution had been belied, and to offer it his best wishes. Though the Legislature ultimately gave about $15,000 for completing the hall, and nearly $30,000 for furnishing it, the endowment had

after all been reduced by some $45,000.[1] The ugly brick building became as soon as completed what it has been for nearly fifty years—the center of the University. It was justly described as one of the most spacious and convenient in the West. The large basement had windows that projected well above the surface of the ground. Above this rose four full stories, and the whole was topped by two towers for clocks and bells. The western or library wing contained on the main floors three large halls, devoted to library, museum, and art gallery; the eastern wing contained a chapel, a physical laboratory and lecture room, and draughting rooms. The main part contained thirty classrooms, on the top floor were the literary societies' quarters, and just over the entrance was the Regent's office. The arrangement was excellent, and all the rooms, corridors, and staircases were spacious for the period. The Arkansas State University later duplicated the building in Fayetteville.

The chief other building erected under Gregory was the Chemical Laboratory, completed and furnished in 1878 at a cost of $40,000. Containing five laboratories, with desk room for 300, one of them fitted up especially for intructors, and a lecture room seating 200, in its day it was adjudged one of the best structures of the sort in the country. The plans were those of Prof. N. C. Ricker. A tiny astronomical observatory was also erected, and some minor farm buildings; while during part of this period the University tried to provide dormitory accommodations for the young women, and for a time even considered converting the old Institute

[1] This statement of supplementary appropriations for University Hall follows that dated August, 1874, in the Board Report, 1873-74, p. 122. But the catalogue of 1874-75 states that a total of $127,000 had been appropriated for the erection and furnishing of the building.



LAW BUILDING AND UNIVERSITY HALL

building into a hall for them in connection with the domestic science courses. When this plan was broached, Gregory decided to try the experiment first on a small scale; and he provided at his own expense during 1872 a home for the women, fitted with parlors and laundry, and hired a matron experienced in boarding school work. By an extension of this arrangement, two dwellings being used, over forty women students were ultimately cared for, receiving board and an unfurnished room at $3 a week. But the men retained the dormitory.

The University library had its beginnings when in 1867 Dr. Gregory spent $1,000 in buying 644 volumes in New York—of which 210 were in history and biography, 113 in science, and 44 in poetry, English literature, and historical romances. Two years later the library embraced over 3,400 volumes, with history and biography still well in the lead, but with a collection in agriculture on which the University prided itself. In 1871, when there were nearly 5,000 volumes and 60 periodicals, half of them agricultural, the first librarian's report was received. It stated that books were taken freely by the faculty, but to a very limited extent by students, who had to charge them to the librarian or some teacher; while progress was being made upon a written catalogue. That summer Prof. Baker visited England to purchase new volumes. Thus the library grew, Gregory frequently complaining that nothing was more vexatious than the Trustees' failure to keep the collection abreast of the times, till when he went out of office there were 12,500 volumes, 1,000 pamphlets, and 80 current periodicals, or enough, he thought, to justify the hiring of a librarian on full time. As for the University museum, it had

its beginnings in Prof. Powell's trip to the Rockies, and in a summer tour of Illinois made by Prof. Burrill and five helpers in 1869 for the collection of plants, birds, insects, small mammals, and geological specimens. It had no legislative help till 1877, when it received $3,000 for raw materials. Yet three years later it contained mounted specimens of nearly all the ruminants of North America; representatives of practically all orders of mammals; all the families of North American birds; fishes, shells, imitation fossils, and Indian relics. It early served as a powerful stimulus to the study of the natural history branches, and for several years divided with the art gallery the interest of students and of the general public as one of the two show places about the University. Much of its best material was, in fact, the product of the work of a band of enthusiastic students led by an unusually active and promising field naturalist, George A. Wild, an instructor who went to England in 1880 to study under Huxley, but who died soon after returning.

The art gallery grew out of one of Gregory's early visits to Europe, and was for its day a considerable achievement. It was in order before the Centennial Exposition opened; and most public art in this country is held to date from the Exposition. No collection in the West at the time surpassed it in the number and value of its pieces. The $3,000 needed for it was raised by a local subscription. Most of the objects were selected in Paris. There were 16 full-sized statues, as of the Laocoön and Venus de Milo; 42 statues of reduced size, 400 lithograph portraits, a hundred full-sized busts, and photographic reproductions made by Braun of many paintings. When the first casts arrived broken, Mr. Dunlap remarked that if ground they would make

excellent fertilizer. But the gallery attracted many visitors, and high schools even organized special excursions to it, while it was the inspiration of the single alumnus now well known as a sculptor—Lorado Taft.

The organization of the University was simple under Gregory, in accordance with its slender resources, the then limited idea of university education, and the State's distaste for pretentiousness. It was launched with a clumsy division into nine schools, expanded in the second year into fifteen which were simply so many departments. But the fourth catalogue announced, with a careful explanation, the inevitable change into colleges: the colleges of agriculture, of mechanics and engineering, of chemistry, of natural history, and of literature, science, and art, with the schools of commerce and of military science. Each student was expected to enroll himself in some college, though he might vary from the course of study suggested for it. In addition to the teachers already named, by 1872-73 there were Prof. Stillman W. Robinson, in charge of mechanical engineering; Prof. J. Burkitt Webb, civil engineering and physics; Prof. Joseph Carey, the ancient languages; Prof. Don Carlos Taft, geology and zoölogy; and one or two minor officers. The only change in the colleges came in this year, when that of chemistry was dropped and its courses included in the renamed college of natural science. The number of schools, however, both within and without the colleges, multiplied. Thus before 1879 the college of literature and science was divided between one representing the modern and one the ancient languages; a school of domestic science and arts was announced, and the courses in drawing developed into a school of art and design. In 1878 the first deans had begun to serve—Prof. Snyder for lit-

erature and science, Prof. Burrill for natural science, Prof. Robinson for engineering, and Prof. Morrow for agriculture.

The development of several of these divisions has some aspects of note. Thus the college of engineering, which was largely the creation of Prof. Robinson, was responsible for the opening of the first educational shop-courses in America. When Robinson arrived, he found his scant work-materials sharing a rough stable with some mules; and with $2,000 he drove the mules out, added a second story, built a steam engine and installed a lathe, and with his students proceeded to make a variety of machinery for the shop. This, apparently, was the second practice shop to be opened in America.[1] In the new mechanical building he introduced some novel pedagogical principles, for the classroom work was professedly instruction in invention, and while careless of discipline, he aroused the enthusiasm of his small groups of disciples. He himself took out a number of patents. In this building during his nine-years' stay were made, besides the steam engine which furnished its power for twenty-five years, a number of ingenious mechanical movements, a machine for automatically graduating thermometer scales, still unique, a sewing machine, and the tower clock of University Hall.

Characteristic of Robinson's ingenuity was a problem

[1] It was the sight of an exhibit by the shops at the Centennial Exposition which led President Runkle of the Massachusetts Institute of Technology to introduce shop work into that institution. A visit to the shops by the president of the Trustees of Rose Polytechnic Institute gave to Mr. Rose's beneficence the direction it took. In 1873 N. C. Ricker, appointed instructor in architecture, brought from his European study some practical suggestions as to the shops. It is said that a Trustee led Ricker into his newly-furnished quarters with the remark that he was "expected to make the d——d thing pay!" Board Report, 1888, p. 206.

once given his class in physics during its study of mathematical optics—that of designing a spectacle lens which, worn by a public speaker, should be free from the reflection that frequently annoys his auditors. One piece of apparatus which he designed and had constructed in the shops furnished the only instrument that a decade later could measure the flow of gas from the wells of Indiana and Ohio; while certain of his mathematical investigations refuted the conclusions of two authorities on river hydraulics. And if his pedagogical methods were informal, they were none the less thorough. It was a period in which many educated people thought that the proper function of an engineering college was to give students a rapid and superficial knowledge of technical formulæ and methods, and a book written to show that the engineer had no need of higher mathematics gained a wide reading. Robinson stood staunchly by his belief that engineering gave scope for extended research, and must be founded on a thorough mathematical and scientific education. He stood, too, by his faith that its future was to belong to the college-educated man. Practical engineers in the West were impatient of book-taught newcomers, but Prof. Robinson's standing persuaded them that his pupils were worthy of a trial. It was a distinct misfortune that a higher salary attracted him to Ohio State University in 1878. Before he went he had seen three of the four departments of his college firmly on their feet—mechanical science, civil engineering, and architecture, the last being one of the four good schools in America. The department of mining engineering never gained sturdiness.

From the point of view of administration the college of agriculture had as uneven and dismal a history as

from that of enrollment and State confidence. Horticulture was put under the charge of Burrill, who by the early seventies held sway over 130 acres, assisted by an orchardist, gardener, and florist. But it was long difficult to find anyone to assume the chair of agriculture, Bliss soon resigning to go to his own large farm, and Miles at first teaching irregularly. The farm was well managed and more than paid for itself, while some instruction in agricultural theory was early pieced together. Thus in 1871-72 lectures were given on soils and fruit-growing, by Burrill; on general agriculture and stock-raising, by Miles; and on veterinary surgery and gardening, by two outside lecturers. Finally, Prof. George Morrow took up the work in 1877—one of the most prolific writers of the time in agriculture, and one of the five or six real pioneers in the science, but unable to do much more than lecture and write. The first year under him was spent in the study of botany, vegetable physiology, and chemistry. The second was devoted to soils, fertilizers, general horticulture, and entomology. The third included agricultural engineering, and architecture, animal husbandry, dairying, and landscape gardening. The fourth comprised rural economy, the history of agriculture, rural law, and some special investigation, with a thesis. The course in horticulture ranged from studies in pomology, forestry, and floriculture to mere related courses in botany and entomology, and with a liberal interspersion of general studies it also stretched over four years. But much in both fields was merely nominal.

Gregory showed prompt and unusual understanding of the possibilities of the experimental farm, which was provided for in 1871. These experiments, he asserted, must be systematic, and an exhaustive series would neces-

sarily occupy many years. Following the recommendations of Bliss and W. C. Flagg, he had surveyed a number of plats (these are the oldest consistently devoted to such a purpose in America) for experiments in cultivation, and with fertilizers and plants, and he recommended experiments in animal husbandry. For a time these plats were under special direction of the semi-absentee Flagg, but in a few years were united with the general farm.[1] But none of the agricultural experiments were half so valuable as those of Burrill in horticulture. The latter's first published paper was a report to the Board in 1869, and he presently began general publication in scientific magazines of the results he achieved. Some of these papers were upon a subject which he was the first scientist to discuss—the bacterial origin of diseases in plants. His conclusions were for a time scouted by foreign investigators, but have since been accepted as a notable achievement, his proof having turned out to be incontrovertible. From 1873 to 1880 he stood alone in America in teaching plant pathology in connection with botany. In 1880, in the *Transactions* of the American Association for the Advancement of Science, he demonstrated the origin of the blight of apple and pear trees in a new bacterial species; and he also made valuable studies of the "peach curl" and the black rust of certain flowers.

The school of commerce, announced in the first catalogue as designed to make students accountants, suc-

[1] In November, 1868, Flagg recommended that the farm superintendent report a scheme of agricultural experiments for 1869; and the Board's horticultural committee at the same time presented an elaborate programme of horticultural experiments. Gregory submitted the recommendations of Bliss in March, 1869. Reviewing the farm experiments up to 1880, Prof. Morrow speaks of them as "conducted by Messrs. Flagg, Lawrence, Johnson, Prof. Miles, and the writer."

cessful agents, and managers of commercial enterprises, gave brief promise of becoming the first University department of its kind in the country. It was to include all branches casting light on the phenomena of business and traffic, upon the laws of production, exchange, markets, and currency, and upon the history, law, and usages of commerce, domestic and foreign. But the time was not ripe and by 1875, when Fernando Parsons took charge of the school, signs were plain that it could be little more than a weak analogue of the modern cheap business college. Three terms only were given, two of which were in bookkeeping. Later a course in "actual business" was instituted, and the student was required to furnish $2,000 in college currency with which to carry on his enterprises, depositing a tiny fraction in real money to get a genuine sense of gain or loss. A commercial bank having been equipped, in a few years it was possible to reproduce a large number of business situations, while there were courses in penmanship, commercial calculation, and law. Yet the work of the school could be comprised in two years, most students took but one, and in 1879-80 the Trustees thought so little of the whole as to discontinue it.

The school of domestic science had a career as brief, but far more creditable. Half a dozen years after the University opened Miss Louise Allen came to it with previous educational experience, and spent the fall of 1874 in preparing the program of what, as she claimed in a special report to the Bureau of Education, was the first college course of high grade in domestic science organized in this country. It included the architecture of the dwelling-house; the principles of physiology and hygiene; the nature, uses, preservation, and prepara-

tion of food; the chemistry of cooking; the uses, construction, materials, and hygiene of dress; the principles of taste; the culture of house and garden plants; the laws of markets; and the usages of polite society—that is, etiquette. Well ballasted with chemistry, physiology, and with mathematics through trigonometry, it was not easy. Miss Allen delighted to quote Mr. Massey in "Adam Bede": "A woman will make porridge every day for twenty years and never think of measuring the proportion between the meal and the milk; a little more or less she'll think don't signify." She was a woman of great energy, and with slender resources not only taught some part of all the above subjects, with lectures on personal health and the care of children as well, but opened a food museum on a London model, and planned to show a kitchen fitted with the most modern conveniences. She also had part of the library wing of University Hall fitted up as a woman's gymnasium, and there gave instruction in calisthenics, which some of the most important medical men in that part of Illinois came to see. In 1879 she became a professor, and soon after the Trustees justly congratulated her on having demonstrated the utility of a practical education for women. Her marriage with the Regent brought about the closing of the school.[1]

Of all the departments, that of military training was opened with the most glorious dreams of the future, and was most harshly brought to a practicable, humdrum plane. The military course was a feature neither of

[1] The imperative reason for discontinuing the school of commerce was the necessity for economy; and after Mrs. Gregory's resignation, the same reason militated against continuing the domestic science work. It also dictated the giving up of the school of mining engineering. The whole policy was, as places became vacant, to distribute their duties to other persons or to climinate these duties.

Turner's nor Morrill's original measures, but was added to the Morrill bill in its last stages by amendment. In the period just following the Civil War it caught the popular fancy. It was felt that this military instruction would scatter throughout the nation a body of men indispensable in war, and would also be a splendid disciplinary force at each institution. In no State were greater expectations pinned on it than in that of Grant and Logan. Gen. Brayman prepared a special plan which contemplated little less than making a new West Point of the University, though a liberal one. The students were to be organized as in a military camp, with the usual regulations as to exercise, recreation, sleep, the reveille, the roll call, and the tattoo, arranged not to interfere with studies. They were to wear uniforms as an habitual dress, thus achieving democracy and neatness at once, and awakening the manly pride of each student. The inspiriting fife, drum, bugle, and military band were to be heard. Daily martial exercises were to be enforced, so that at proper intervals every student might be withdrawn from mental effort for physical development. Thus, in Gen. Brayman's opinion, "the race of wretched dyspeptics, hypochondriacs, and consumptives which crowd the learned professions" was to be forever abolished in the West.

Col. Shattuck, the first military head, was soon succeeded by Snyder; and in 1877, after repeated applications to the War Department, and enlistment of the help of Congressman "Joe" Cannon, Lieut. W. A. Dinwiddie was appointed professor of tactics, soon after—following a laughable struggle with Snyder—becoming commandant. For a time Gen. Brayman actually induced the University to outline a three years' military course to qualify graduates as army officers, but this

was quickly given over. Nevertheless, throughout Gregory's administration all of the classes drilled. First the State and then the Federal Government supplied arms and accouterments, uniforms of cadet gray costing $27 each were introduced, and when in 1872 a drill hall of 120 feet by 80 was opened in the second story of the mechanical building, the appearance of the batallion improved greatly. It gave exhibition drills before legislative committees, and in 1871 was taken to the Chicago fire, later receiving a donation of $4 per man from the Legislature for its services in guarding dark streets. Before the centennial year it had been incorporated into the Sixth Regiment of State Guards—a temporary connection—and as the Guards hoped to go to the Exposition, Snyder did his utmost to arrange for the attendance of the students, planning a schedule by which each could make the trip for $40; but his hopes fell through. After 1875 the Governor made it a practice to commission as captains in the militia those students who had passed the courses in tactics, had gained the necessary experience in command, and had been indorsed by the faculty. At first little experience was required, but later no one could become lieutenant who had not reached the junior class.

In the financial history of the University occur its darkest pages under Gregory. For several years it made its way without difficulty. Beginning its career with 480,000 acres of land, it was unfortunate that it could not locate a large part of this and hold it for a rise in price. Cornell, retaining its acres, was able to sell part of them at about the time of Gregory's resignation at from three to twenty times the seventy-cent average which those of Illinois had brought. Within the decade all but 25,000 acres had been dis-

posed of, and the endowment brought up to about $350,000, for upon the income from this the University had to live. By spending only about $35,000 to $40,000 for running expenses, the University for a time had interest enough to meet them; while before 1872 there were two liberal biennial appropriations from the Legislature, one for $60,000 and one for $120,000, for extraordinary expenses. An unsuccessful effort was early made to obtain a regular appropriation for agricultural experiments. But about 1875 the pinch began to be felt. Three years before this the Legislature had failed to appropriate the money needed to complete University Hall, and the loss of that sum from its endowment had affected the institution's revenues. But the main cause of alarm was that various financial circumstances had greatly depreciated the rate of interest on the University's bond holdings. At this time Michigan, with an annual income of $100,000, and Cornell, with $110,000, were severely restricted; the case of Illinois was much worse.

The endowment of the University had by legislative direction been invested in State, county, and municipal bonds, at rates on many of from eight to ten per cent. But the "loosening" of money after the panic, with a succession of harvests that brought much cash into Illinois, reduced these rates by nearly one-half. In 1876 the income from endowment reached its high-water mark—$32,543; thereafter it steadily declined, for the securities all carried an option of redemption after a specified time. For the year ending March, 1877, it had dropped to about $29,000, for 1878 to about $25,500, and for 1879 to about $20,500. For some years thereafter it hovered at about $20,000—a sum altogether inadequate.

The first evidences that the University was hard hit appeared when in 1876 the Trustees gave notice that beginning the fall of the next year they would reduce salaries ten per cent. Against this reduction Gregory promptly protested. Supply and demand, he said, regulated the price of academic labor as of all other, and two professors had already been offered better pay elsewhere. He wished the Board to apply to the Legislature, as Wisconsin and Michigan had done in similar instances, and he offered to give up one-fourth his own salary to save his colleagues. But a committee stubbornly reported that a reduction was unavoidable, as the deficit for the next year promised to reach $3,500. The salaries of professors were therefore cut to $1,800, and that of the Regent to $3,600, while other economies were effected. In 1877 the State appropriated $69,000 for the biennium for extraordinary expenses, but none for other, and this fact nullified another protest by Gregory. He pointed to the loss of Prof. Robinson, and declared his conviction that "the University can never be maintained in full power and standing at the present rate of salaries, a rate not only lower than the State Universities and other reputable institutions around us pay, but lower even than is paid at the State Normal Schools." The Trustees did, indeed, appoint successively two more committees on the matter. One differed sharply from the Regent upon the advisability of a categorical demand upon the Legislature for the money needed for maintenance, and for establishing new professorships in physics and history, urgently needed, and it refused to sanction an elevation of salaries to their old mark. The other disapproved, in 1879, of any increase in term fees, and also of any application for the recovery of the college and seminary funds, as the latter would antag-

onize the normal schools which had received them. But it heard with more favor a third suggestion which Gregory had made—that the State be asked for a permanent tax grant.

In this posture stood financial affairs when Gregory left. The suggestion for a tax grant, inspired by the success of Wisconsin in obtaining a levy of one-tenth mill for her benefit, came to nothing. In 1879 the State appropriation was but $25,500. As a measure of desperation, at the end of that year term fees were made $22.50 annually—practically the present tuition. Some of the last utterances of Gregory reflect a deep discouragement. The University, he thought, was already grinding between two millstones; for at least one professor the salary paid was insufficient for his family's comfortable support. In a dozen years the institution had attained a larger growth than had Harvard in two hundred, or Michigan in twenty-five, and now not only its plans for the future had to be surrendered, but some of the ground it had gained. He especially deplored the fact that the teachers were so burdened with routine labor that they had no time for the study and research that alone could make them great scholars. A University, he pointed out, is a place where knowledge is discovered and perfected, as well as a center for its dissemination, and is marked by the presence of men of talent and learning as investigators; Illinois must give up hope of becoming such an institution till she should be more generously treated.

Yet despite all the hardships of the University, all the limitations upon its work, it must not be thought that even at this time it was a place of anything but the hopefulness and self-confidence that go so naturally with high ambitions. The Regent and faculty felt them-

selves apostles of a great movement of progress and reform in education, and took a pride of which it is now hard to conceive in the feeling that they were ushering in a new scientific and industrial education. They felt themselves privileged and distinguished as initiators for the State of Illinois of a much broader instruction than had before been known. This same spirit so animated the student body that there was manifest in the classroom and shop an energy, hopefulness, and self-satisfaction that now seems strangely at variance with the physical conditions under which the work was done. The promise and vigor were those of the sprouting seeds of a unique new growth; the teachers considered themselves missionaries and exemplars of a fresh educational gospel; they felt at liberty beyond all precedent to enter upon and cultivate new fields—as did the teachers of some other Middle Western institutions at the same time. In the face of financial and other discouragements their exaltation and faith in the future only intermittently faltered, either during the administration of Gregory or that of his successor; the institution as a whole was in one sense, and a real one, depressed, but never most of its leaders.

The University was not strong enough to be more than an abject and ineffective suppliant of the Legislature; yet it was straining every point in its eagerness to serve the commonwealth. Nowhere is this better shown than in the care with which it adjusted its entrance requirements to the poor high schools of Illinois. The early requirements were themselves merely those of a secondary school, though some gap between the University and the grammar schools existed, and this was bridged by informal preparatory courses. Gregory shortly recommended that in the fall of 1872 students

be examined in physics and physiology as new subjects, and in the spring of that year he asserted that not only many ill-prepared students were entering, but many who had not tested their ability to study. To continue in lower work would but add an expensive high school to the State's charges, and he recommended that a program of successive advances be adopted. In 1873, thanks mainly to a new law upon the teaching of science in the common schools, physics, physiology, botany, and algebra were added to the older elementary requirements, but even yet deficient students were allowed to enter and "make up" their inadequacies. By this time, also, certain colleges required special preparation—that of natural science demanding zoölogy, for example, and the school of ancient languages elementary Latin and Greek.

The University's chief efforts at the strengthening of matriculants, however, lay in the provision of the preparatory school in 1876, and its adoption of the accrediting system two years later. Only one year of preparatory work was offered, but it included instruction in eight subjects; and thenceforth even entrants in agriculture were asked to pass satisfactory examinations in the essentials of this year. The students were charged fees of $45 per annum, which covered the expense of hiring teachers, and the innovation thus relieved the University of the burden of free instruction in the lower branches. An attempt by Gregory to have the department discontinued after 1881 was blocked by its manifest indispensability. As for the accredited schools, they were in that day of two sorts. One, of which Gregory hoped to find a representative in each county, was simply a school whose examination was accepted in lieu of the University's, and which therefore

saved the students the expense of a long journey. The other, inspected by the faculty, was a school whose graduates were admitted without examination. The lists of both grew rapidly, and tended to become in practice expressive of the same standards. In 1880 they totaled forty, and Gregory, who had visited many, was convinced that the system placed the University in due connection with the public schools.

The University's extension activities were limited, but in agriculture were fairly popular. After the collapse of the plans for the corresponding secretary's office, these centered in the course of public lectures and discussions modeled on the Yale agricultural lectures of 1860. The first was held at the University ten months after it opened, with visiting experts and the professors speaking on such topics as "Chemistry and Agriculture" and "Agricultural Bookkeeping." Thereafter these University institutes were arranged for in dozens of places over the State—seven in one year—the professors heavily reinforcing local speakers. But after 1873 the University cared less to promote them, for the professors were overworked and the State appropriations for them dwindled; faculty members merely put in an occasional appearance at the Farmers' Institutes, though leading farmers repeatedly expressed a desire to see the University discussions reëstablished. The University was otherwise represented outside only by the speeches of Gregory and others at public meetings and high school commencements. So, also, the influence of the alumni was small. The male undergraduates were evenly divided among engineering, farming, mercantile pursuits, and the law and medicine; and women were admitted too late to have any influence upon the schools as teachers.

Student life at the struggling institution, of course, had the natural breath of democracy. The undergraduates were almost without exception poor, in that young State they could have little conception of social distinctions, and the dormitory and the atmosphere of "industrial" instruction fostered complete comradeship. From the moment of arrival they lived in an intimacy and with an informality now hard to realize. They filled their bedticks with straw at the college farm; they "bached it" by cooking their own meals, which consisted mainly of buckwheat cakes and Indian pudding, thus cutting the cost of board to seventy-five cents a week. And love of equality was even one of the chief factors in killing the manual labor plan, introduced from such older institutions as Michigan by the enthusiastic Gregory. It was thought that efficiency could be secured only by having the labor performed in small parties, each directed by a cadet officer; but to work under a foreman who sat by and watched did not appeal to Illinois youths. A little more insight might have taught the students that true democracy dictated their support of the plan, for it was anticipated that they could partly pay their way by working one to two hours a day, except week-ends, according to the season, at a maximum of a "bit" an hour. It was also hoped that it would maintain student health, and give valuable training to town-bred youths. But in any event there would not have been enough work to go around, for after the first fences and walks were built, and gardens laid out, there was little to do. In Kentucky a wagon manufactory had been opened at the University, but Illinois workmen would have nothing of the sort, and Gregory had first to give up the compulsory features of his plan, and

finally, as had the heads of other institutions, to surrender it altogether.

The chief organizations of the student body were the literary societies and the College Government; and the latter was also one of the pet schemes of the fertile-minded Regent. Organized in 1870, upon a plan largely prepared by Dr. Gregory, it followed the general outlines of the Federal Government, having President, Senate, Assembly, Supreme Court, Sheriff, and Prosecuting Officer. Its chief functions were (besides giving the members a pleasant sense of political activity) to drill the students in parliamentary practice, and to enforce order upon the campus. The four "precincts" were policed by men appointed by a Marshal, and misdemeanors were punished by a series of fines, mainly small. No students were allowed to shout or play during study hours, or to whistle, sing, or dance. Residents in the dormitory were not to set their slop-pails in the hall, or sweep their rooms, in daylight. Students caught in possession of liquor, or entering a saloon, billiard hall, or bowling alley, were fined $1 to $5, and those damaging University property might even be fined $25—then a breath-taking sum. Gregory believed implicitly that the Government assisted greatly in discipline, though it was probably valuable mainly as an amusement. Elsewhere college presidents at about the same time believed that similar plans would revolutionize undergraduate government.

The first cases before the Supreme Court were merely those of careless or boisterous students; but in January, 1872, arose a *cause célèbre*. Some terms previously the first fraternity, a chapter of Delta Tau Delta, had been secretly started at the University; and its members had gained control of the College Government and resolved

to measure their strength with the faculty. They found an excuse when in Gregory's absence the acting Regent instructed the student choir to practice in hours sacred to study; and hauling the choir into court, summarily fined its members, and ordered them not to repeat the offense. The choir appealed to the faculty, and was supported by Gregory upon his return, receiving instructions to pay no attention to the Government. Hereupon the wrathful officers called a general student assembly, and carried through it resolutions threatening to disband the Government unless its action was sustained; and as the faculty refused this support, another assembly four days later announced that the Government was automatically at an end unless the Regent retired from his position. The whole was a piece of parliamentary fencing in which the students took a jesting delight, but it had features that were distinctly alarming to Dr. Gregory. He was on the point of leaving for the East to deliver a lecture before some educational association on the merits and success of the College Government system, and he saw himself in a painfully false position. At once, therefore, he had another student assembly called, before which both himself and Judge Cunningham appeared, and at which the latter was asked to deliver a judicial opinion. He decided that the Government was in the right, the faculty paid the choir's fines, and Gregory departed eastward with an easy heart.

The further history of the College Government was one chiefly of spirited elections and of wrangles over constitutional changes. The balloting for officers took place some ten days after the opening of school, and this brief period was filled with hurried electioneering and political maneuvering. For example, in the fall of

1874 the entire strength of the senior class was employed to prevent the choice to any office of James R. Mann, later minority leader in Congress, and then very popular among juniors and sophomores. In the submission of tickets, they saw to it that Mann was put up for both presidency and prosecuting attorneyship, with the expectation of seeing his vote split; and when Mann's supporters promptly filed an irregular ticket in which he stood for prosecuting attorney alone, they circulated an injurious story that he had announced without authority his opponent's withdrawal from the contest for the office, and so defeated him. Now and then the Government took action on some matter of University policy, as when in 1878 it resolved that since the institution was the only school in Illinois worthy the name of University, and since "the name Industrial" detracted from its usefulness, they asked the Trustees to call it the State University. Three years later the students voted 237 to 20 for changing the name. In the latter days of the Government women took an increasing part in its activities, and in 1879 one girl even ran for the presidency, but was badly defeated.

The literary societies were organized during March, 1869, by Gregory, who in chapel proposed two such organizations, calling the roll and dividing the student body into equal parts for them. Named Adelphic and Philomathean, from the first there was the keenest rivalry between them, not only in oratory and debate, but in the election of class and College Government officers. A girls' society, the Alethenai, was added two years later. Each of the men's societies held an oratorical contest annually, the orations being original; each held an open meeting, where such classic declamations as "Rienzi's Address to the Romans" and "The

Execution of Montrose" were delivered with spirit; and there was an intersociety contest, where more original efforts, as on "Chinese Immigration," "The Necessity for Education in a Republic," and "Battles, Their Causes and Influence," held the boards. Musical numbers were also given, and in the late spring a grand concert was held under the auspices of the three societies. They gave picnics, and were the center of all the social activities of the University. The junior and sophomore "exhibitions" of the time differed little from the contests of the societies, save that they included such purely literary forms as the essay, allegory, poem, and even short play. With these, with the class-day exercises, with the contests (after 1874) of the I. I. U. Oratorical Association, and with the commencements, at which each student spoke, forensic exercises did not languish at the University.

Undergraduate publications were not yet important. The first was the *Student*, an eight-page monthly founded in the fall of 1871 by the senior class, which was far more an agent in education than a news periodical or representative of student sentiment. Editors were appointed for five departments, and they—with faculty advice—filled the columns with ambitiously conceived and expressed essays on formal topics. Stray news items fell into cramped quarters on the first page, and there were recorded with Spartan brevity the first athletic contests at the University—the battles of a student team with a Twin City baseball club. Short editorials were soon added, and we find these protesting against the Joseph's coat appearance of the regiment, denouncing the demoralizing influence of an exhibition by Forepaugh's circus just east of the campus, and recommending that the Regent permit use of the drill

hall for dancing. But the *Student's* long articles on "Turbine Wheels," "Man's Depravity," and "The Common Potato," appearing under a quotation from Irving which proclaimed that in America the elegant arts grow up side by side with the coarser plants of daily necessity, roused a revolt. We can better its contents by consulting an encyclopædia, complained the correspondents; why doesn't it retail the numberless incidents which happen in chapel, library, recitation and society rooms, and on the military field and playground, with a full column of personal notes? And in December, 1873, the *Student* perished.

The next month saw the appearance of the *Illini,* a monthly at $1.50 a year, under the control of four appointees of the College Government. It, too, had to wrestle against learning and formal literature, for the first issue contained an article upon thermometry in clinical investigations, and it continued the deadly essays upon "Criticism," "Labor," "Business Integrity," and so on, obviously reprints of the papers read by sophomores and upper-classmen in chapel. But from the outset it contained more local news, while in 1877 the literary matter was sharply cut down, and a pungent editorial struck at the faculty insistence upon "the stolid, hide-bound character" of the paper. The movement proceeded apace, and two years later another editor reduced the space for the literary articles from fourteen to eight pages. In 1880, under a senior who later became an editor of the Chicago *Daily News,* the *Illini* appeared as a semi-monthly, in the most attractive dress it had yet borne—a rough facsimile of the *Nation.* There were twelve four-column pages, and the fresh and vigorous editorials held the first three or four. The editor displaced a large part of the remaining lit-

erary matter with seven columns of local news, a column of humor headed "Knickknacks," and exchange news. The heavier matter consisted to some extent of travel sketches and verse by the faculty.

The first fraternity, Delta Tau Delta, was organized at the University in 1871-72. The face of the faculty was set against any such organizations, and Dr. Gregory warned the students against them yearly; so it is not strange that the officers did not get proof of its existence till 1875-76, though the student body had suspected its existence long before. Jealousy of it by most students had already asserted itself, and in 1876 Dr. Gregory took the matter before the Trustees. Fraternities he denominated as undemocratic, anachronistic, silly, and conducive to dissipation, while he was especially opposed to them on the ground that they would interfere with the experiment in student government. A resolution of condemnation was passed by the Board. Nevertheless, the chapter for some time lived on surreptitiously and vigorously.

Towards the end of the seventies it was apparent to any observer that the cares of his position were telling on Dr. Gregory. He was as much as ever the life and center of the University. But in 1873 a hostile legislative element had reduced the number of Trustees from thirty-eight to eleven, and had deprived the Regent of his place on the Board; so that though he appeared regularly at Board meetings, and though the Governor often accepted his recommendation concerning the appointment of Trustees, his wishes in administrative matters were more easily thwarted. He could never obtain the Board's full support in his requests for public grants. And more than any opposition, the public

apathy in regard to the University galled him. During the latter part of his administration, when the colleges of the State were forming an association, the head of one protested against admitting the University as not a true institution of higher learning at all. It is said that one of the Governors told Gregory, when the latter was presenting the claims of the University, that nothing could be done, adding: "The State washes its hands of the whole damned thing." Many people in Illinois had never heard of the institution, and the majority regarded it as a queer and unsuccessful attempt at State vocational training. Worries concerning financial matters, too, were constant; even one of the janitors, rebuked for profanity, retorted, "What do you expect for $35 a month, Doctor?" The Regent's health was not of the best, for his incessant labors told on his constitution.

In all, he began by 1880 to be thoroughly tired of his position, and to long for a new field. This feeling was intensified by the consciousness that he was no longer held in the old worshipful regard by the students. To this loss in esteem, which might well have proved very temporary, his frequent absences from the University and absorption in administrative cares contributed. Even his brilliant chapel talks, by dint of much repetition, palled upon them. The climax came in the spring of 1880, in the "first military rebellion," evoked by a faculty resolution which laid down some new rules for the regulation of military classes and appointments, and in particular one that no student should be recommended for a State commission unless he was conspicuous for excellence in scholarship and gentlemanly conduct; and that these recommendations should not, without unanimous faculty vote, exceed five in one year.

The upper-classmen felt that this did them an injustice, for they had entered the military department under other rulings; and they promptly took steps to withdraw from their posts in the batallion. The rebellion was finally crushed, but it kept the University in a turmoil all the winter term, and though its nature might easily be exaggerated, it was expressive of no little general discontent. Partly as a result, Gregory felt that he no longer cared to remain with so huge and thankless a task, and to the general regret of the faculty, resigned in June.[1]

[1] Gregory told the Trustees that for over thirteen years he had done the work of two men, and that now the University had attained permanency, he wished to seek a field of lighter labor.

III

YEARS OF DEPRESSION: THE ADMINISTRATION OF PEABODY

The Second Regent. The University's Continued Poverty. Want of Elasticity in Organization and Spirit. Slow Progress in Buildings, Equipment, and Registration. The Hatch and Morrill Supplementary Acts. Change of Name, and in Constitution of Board. Dissatisfaction with Regent and Overthrow by Alumni. Development of Student Life.

Dr. Gregory's resignation was effective September 1, 1880, and till next March Dr. Selim H. Peabody, professor of mechanical engineering and physics, served as Regent *pro tempore,* when he was elected to the Regency. The new head was of long academic experience. After graduating at the University of Vermont, he had been superintendent of schools at Fond du Lac and Racine, Wisconsin, had long taught in Chicago, had been professor of physics at the Massachusetts Agricultural College, and had served as secretary to the Chicago Academy of Sciences. When in 1878 he had come as professor to the University, he had produced a considerable impression by the vigor with which he taught his classes and systematized the shop work. He resigned to accept the editorship of what became the International Encyclopædia, and in New York compiled a book on American patriotism, but was almost at once brought back to Illinois. The significant fact about his career, however, was that by far the greater part of it had been spent in public school work. It was in 1859 that he went to his first Wisconsin post, and not till 1868 that he resigned

as director of the evening high school in Chicago. He was above all else an educator in the narrower sense, drilled in the educator's routine. His training had accentuated methodical, precise traits of mind that threw him into contrast with Gregory, sanguine, energetic, inclined to dream and plan in a large way.

Dr. Peabody was received warmly by the faculty, and most students,[1] and must have seemed an excellent choice for the place. He was physically commanding, his scholarship was high—he had a doctorate from Vermont—and he knew how to use it, and though as a speaker he was ineffective beside Gregory, in writing he expressed himself well. His conception of the functions of the University was much what Gregory's had been, for while he quite grasped the idea of the founders, he also had been liberally trained. He was proficient primarily in engineering and no one who sat under him in the classroom or worked in his laboratory could fail to be impressed with the fact that his knowledge here was thorough and that he had a rare ability in imparting it—but it was his boast that if necessary he could take the place of any professor. For example, he was a good entomologist, with a valuable collection of beetles. Like Gregory, he wished to keep the practical studies in the foreground, but believed that if a farmer's son tasted a little Latin it would do him no harm. Finally, he was the model of industry that his predecessor had been, with this difference—that Gregory had

[1] "In the first place," said Dr. Peabody in later recounting the difficulties he had faced, "many of the students looked askance at the new Regent, part because he was not Dr. Gregory, part because he was not Dr. McCosh. The seniors were said to have held a meeting to determine whether they would return or not, but kindly consented to give the new man a trial." Yet the *Illini* was effusive in welcoming him.

avoided the petty minutiæ of the daily round to apply himself to larger things, while Dr. Peabody wrote his letters with his own hand, issued all class permits, and entered all class grades. In this he betrayed a certain want of imagination and executive grasp. But his outlook upon the future of the University was of a wholly different kind from Gregory's, in that he cared little for expansion but much for perfection, little for numbers but much for size and efficiency.

He was fully appreciative of the desperate character of the University's finances, and perceived the necessity of asking the State to assume part of the ordinary expense of maintenance. In the last thirteen years the Legislature had appropriated $350,000 for buildings, taxes, and experiments, but not a cent for general teaching purposes. Peabody brought a number of arguments to bear in asking through the Board for a biennial operating fund of $20,000. He recalled the fact that when the University opened, the teachers were young men who could be employed for little pay till they had made their reputations; this they had done, yet they were paid less than at the beginning. The institution was fast becoming a nursery for young men, who were picked off by older and richer colleges when they had shown their usefulness. He recalled that fees could not be increased; and he actually succeeded in obtaining a little over half the sum asked, or $11,400. In 1878 Iowa had voted an annual grant of $20,000 to her State University, in 1881 Ohio State University first received an annual appropriation of about the same amount, and in 1883 Indiana University, which for a decade had received $15,000 yearly to supplement its current funds, was given the proceeds of a half-mill tax for twelve years for endowment.

There is no disguising the penuriousness of the Legislature, and it is not just to blame Peabody too much for his later failure to wring more money from it. The institutions named were older than Illinois, as were the comparatively prosperous Wisconsin and Michigan, and had won a place in the regard of many legislators. In Illinois there was still little belief in popular higher education, and economic discontent wrapped Springfield in an atmosphere of economy. The price of farm products and the wages of labor were painfully low. Far and wide it was a discouraging decade for university men; at home it was the decade in which the old University of Chicago died and Northwestern reached a low ebb. Yet as after this hopeful beginning the University's financial outlook continued painfully narrow, its friends soon came to regard Peabody as partly accountable. He himself remarked that if the State gave the value of one ear of corn for every four acres of grain it would amount to more than his receipts, and he knew that university heads in weaker States were obtaining larger sums. Yet biennium after biennium he went to the capital with requests that proved little more than those made by the normal university. An agent of the latter, later to become President of the University, once reproached the Regent for his lack of courage, and was at once suspected of trying to defeat his modest plans by making them unconscionably large. The best of efforts might have failed, but in time more and more wished for a larger effort to be made.

The State's contributions were kept at a slowly rising level during the decade. In 1883, when the income from endowment had fallen to a beggarly $16,000, and the deficit threatened to be nearly that much, Dr. Peabody obtained a biennial grant of $54,000, of which half was

for current expenses. Not for eight years did the appropriations go more than a few thousands above this figure; they then reached a total of a little less than $75,000, although $70,000 more was given the same year for a natural history building.[1] This regular stipend was sufficient to admit of only a part of the progress for which the University's friends hoped. Most of the salaries were early restored to the old mark of $2,000 for professors, some equipment was purchased, and additions were slowly made to the faculty.[2] But this did not spur Peabody to ask for large sums specially for growth; his calculations of the funds needed were close estimates of requirements on the existing basis, with perhaps slight additions, until almost every cent could be shown to be so necessary that it was difficult for the Legislature to make cuts. Under him steady progress was possible, but not advances by leaps and bounds. For such advances the University was not ready in 1880 or 1885, but it was ready in the last years of his term. There was hardly a want of pressure upon him, for repeatedly he was asked by the faculty to transmit requests for more pay to the Trustees, while from the alumni came protests at the shabby way in which the State was treating the University. Early in 1888 a committee of the Chicago Alumni Club considered means

[1] The general appropriations for the different bienniums were: In 1881, $41,300; 1883, $54,500; 1885, $53,500; 1887, $54,500; 1889, $58,650, and in 1891, $74,200. In 1889, $10,000 was added for a drill hall, and in 1891 $70,000 for a natural history building. The amounts biennially appropriated for current expenses of instruction were, for the six bienniums: $11,400, $28,000, $24,000, $32,000, and $40,000.

[2] Several professors earned larger incomes by holding two or more positions at once: e. g., Dr. Burrill was a professor, was in the employ of the experiment station, and assisted the State Laboratory of Natural History; Shattuck as Business Manager had first $300 and then $600 added to his salary.

for securing more generous legislative treatment as well as for inviting the notice of public-spirited citizens who might give to the University. The Club stated its willingness to spend years in maturing an endowment plan, but the move came to nothing.

Dr. Peabody's handling of the University budget was conscientious and wise; at the very outset he instituted an improved bookkeeping system. His cautious and methodical traits were also evident in the attention he gave the University's invested capital. Soon after he took his chair it was evident that immigration into Nebraska was greatly increasing the value of the 9,000 acres of University lands there. One bid of ten dollars an acre was made, but not accepted. By judicious management, sales conducted during the next six years brought in a total of $155,000, or enough to raise the endowment to almost $475,000. The Regent expressed natural regret that the University did not own a hundred thousand acres; though of course the same reasons that made proper the sale of 1885 of lands that would have brought much more in 1900 had made proper the sale in 1870 of tracts worth much more fifteen years later.[1]

The turning point in the University finances came less through State than through Federal appropriations, carried by two measures: the Hatch Act of 1887 for agricultural experiment stations, and the Morrill Supplementary Act of 1890. The first was a fruit of the efforts of an association of the land grant colleges

[1] Trustee Emory Cobb had been an advocate of the policy of locating and holding as much of the land scrip as possible; the Board at first proposed to do this with 50,000 acres, but the pressure for funds was too great. Cobb even undertook to organize a syndicate to hold the land, but, among other obstacles, a public cry of "land-grabbing" defeated this excellent scheme.

which Dr. Peabody was prominent in helping form in 1882, and which met annually thereafter. This association persuaded Senator Cullom, of Illinois, to introduce a bill in 1885 for Federal assistance to agricultural research, but it failed in the House. At a later Congressional session, a committee composed of Presidents Atherton of Pennsylvania State College (who had been at Illinois and was its most effective member), Willets of the University of Michigan, and Lee of the University of Mississippi pressed a similar measure, with the result that $15,000 was made available annually for each experiment station. But of much greater importance was the Morrill Supplementary Act, also supported by the association, for it carried a larger sum—$15,000 the first year, and $1,000 more annually till $25,000 was reached—and it was applicable to all the branches taught in the land grant institutions in any way bearing upon the industries, even English and economics being named. There was something pathetic in the joy with which this appropriation was received by the half-starved University. Peabody was at once for taking precautions lest it be made an excuse by the Legislature for cutting off its wonted aid. If the funds were not put into immediate and active use, he warned the Trustees, if the machinery of the University were not enlarged to utilize them at once, there was danger that the State grants would be diminished by an equal amount. He had the whole equipment of the University scrutinized, and he himself made ten main recommendations for expenditures.

Though the development of the curriculum under Peabody was slow, though he himself said in 1888 that "the period has been marked by no large undertakings," there was a creditable steadiness about it, particularly

after 1885. This was exhibited by the increase in the faculty. When he entered office there were (1881) fifteen professors and six assistants or instructors. In 1885-86 there were seventeen of professorial grade and ten such subordinates. In 1890-91 there were twenty-five of professorial grade and fifteen such subordinates. Even this was a rudimentary organization, as the preponderance of professors and the fact that the Regent himself long taught engineering and "mental science," shows, but it represented an improvement. In the instruction was manifest a growing experience and maturity, though salaries showed little change. Thus in 1883 most professors were paid $2,000 each and two $1,500, while the Regent had but $3,000, his salary not being restored to the original level till he threatened in 1886 to resign, having been offered the presidency of Rose Polytechnic Institute. In 1892 ten professors were receiving $2,000 a year and seven $1,500—much the same rate as a decade before. Peabody often spoke of the inadequacy of the scale, but it remained for his successor to make suggestions for its increase on a systematic plan.

This growth in numbers of the faculty body, which Dr. Peabody described in 1888 as "one brotherhood, imbued with one single purpose, striving together to show how each may most surely advance the interests of the science which he loves and of the University which he serves," and which did have a remarkable *esprit de corps,* made possible the formation of a genuine faculty community. In the early years of the University many members had built themselves homes in the neighborhood of the campus, and lived there in an isolated social group—Regent Gregory and Professors Burrill, Shattuck, Snyder, Taft, Ricker, Weber, Crawford, and

Baker being its most prominent members. This group was later broken up, most of its members making their residence in one of the towns, and finding friends in their own near vicinity and at their own churches. The citizens of the towns were inclined to rate the faculty men according to their known income, and to look upon them as a worthy but dependent class, unable to make adequate return for social favors and to be treated with a veiled condescension. After 1885 the unsatisfactory nature of this mode of faculty life, with the improvement in street car service and the growth of the University, led to a new building movement near the campus, where students and faculty were in close contact, centers of petty trade were formed, and newcomers settled as a matter of course. In the new community fitter social standards were presently established, based on culture, personal charm, academic distinction, length of service, and to some extent on executive rank. Differences of income were largely ignored, social usages were rather formal but simple and unassuming, and a feeling of democratic comradeship and general good will grew up which made of the "old faculty" a delightful society, remarkably unified and harmonious notwithstanding its diverse origin. In this faculty there was a greater cultural enthusiasm than publications or research would indicate.

At the beginning of Peabody's term there were, as before, four colleges—engineering, natural science, agriculture, and literature and science. The college of engineering was divided into three schools—mechanical engineering, architecture, and civil engineering; while in natural science were the schools of chemistry and natural history, and in literature and science of the ancient and modern languages. Three years later, as

the result of a new State law for fitter inspectors, the school of mining engineering was revived; anticipating a demand for trained men, the University invited T. B. Comstock, of Cornell, to take the professorship. But this was the only new school added before 1890. Enlargement of the course of study had to lie in the enriching of the old divisions, all of which, even to art and design, were retained.

Thus in engineering courses in electricity, first offered by S. W. Stratton, one in heat engines, one in machine drawing, one in masonry construction, and a variety of new courses in architecture were added under Dean Ricker. In natural history courses were added in microscopy and biology. The chief additions in literature and science were advanced French and German, advanced Latin and Greek, philology, and composition and elocution. A special French teacher was appointed, and Snyder relieved of this branch, while the coming of Professors Barton and Moss in 1890-91 made possible the richer offering in the classics. The composition course, which brought James Brownlee in 1885, affected the whole University, for it grew out of Peabody's sense that most students, especially in engineering and agriculture, were such defective writers as to be discreditable to it. Theme-writing had reached only a few; the literary societies enrolled less than one-third the students, and so far lacked proper control that errors and mannerisms were as likely to be fostered as corrected by them. Brownlee's course was arranged to extend through all colleges and all years, each class being divided into manageable sections and meeting weekly. The first two years were devoted to themes, which were criticized partly in public, partly in private; and the last two to elocution. The result, it was thought, was

at once visible; and the Regent deserves praise for perceiving that all graduates should have a thorough grounding in composition. At the very close of the administration a two years' arrangement of certain courses in philosophy and pedagogy was offered. Only in agriculture did the curriculum remain unchanged.

There were also certain of Peabody's instructional plans which came to nought. He constantly wished, but was quite unable, to institute a course in pharmacy, for a great obstacle to it existed in the demand of the State Board of Pharmacy for four years of active drug-store practice as a prerequisite for a license. He wished to make more of the college of literature and science than he was able, for—apart from his inability to obtain funds—he rightly attributed its low state to several difficult factors. The University had persistently weakened it by keeping the entrance requirements low, by admitting many not fitted for hard college work, especially women, and by "tempering the work to the feebleness of the lambs." In other colleges entrance requirements were so high that matriculants feared the examinations, but in this one such laxities as the permit to "make up" preparatory Latin after admission remained. Furthermore, while other colleges were given laboratories and equipment, this one was the Ishmael of the household. And the tendency over the State was to represent the literary branches as poorer than they really were. Students went by a traditional impulse to the established seats of liberal training, and the very efforts of the University to prove its devotion to agriculture threw its other work into a bad light. The school of mining engineering, again, despite the fitting up of a special laboratory in 1887,

failed to attract students, and Prof. Comstock soon after disgustedly left his place vacant.

Finally, whatever Dr. Peabody's attitude towards special work for women, little was done either in domestic science or calisthenics. After a period of neglect, Miss Allen's place was handed over to Mrs. M. A. Scovell, wife of one of the professors, who served also as "Preceptress." But she and her husband soon departed, and as funds were lacking, a substitute was hard to find, and the desire of the women for the work was doubted, it was given up entirely. At least once the women asked for a restoration of their gymnasium, but there was no room for it, and Peabody asserted that the health of the girls—except for a few residents of the Twin Cities whose parents allowed them too much social diversion—was excellent. However, there was a general feeling that the social atmosphere of the University was not one in which women could take great profit, and that more definite attention to their needs would have improved it.

The growth in registration under Peabody is marked by the advance from 352 students in 1881-82 to 519 in 1890-91, these figures including the preparatory department. For a time attendance actually fell. Five years after Peabody's coming it had dropped to 332, and not till 1888-89 did it rise above 400, its sudden expansion by nearly thirty per cent. being traceable to a new State confidence. During the decade the college of agriculture just held its own, and that of literature and science did not quite do so. The great increase was in engineering and in science, and here between 1887 and 1891 it was nothing less than phenomenal. About the former year Peabody reported that so large a proportion of the new accessions had gone into

engineering that the two shops were crowded to capacity, while the upper classes had neither sufficient tools nor room. Engineers and architects were then in constant demand at high wages, and the instruction at Illinois could hardly be bettered in the East. In architecture, for example, Illinois was still one of only four reputable schools, and in structural work easily stood first. The very rigor of the courses attracted young men of earnest parts. Thus when Peabody came there were 99 students of engineering, seven years later there were 160, and when he departed, 252. He estimated upon retiring that the number in mechanical engineering had grown one-half, in civil engineering had nearly doubled and in architecture had nearly trebled. The registration in science was kept not far from fifty until the last two years, when it suddenly rose to about ninety.

The poor enrollment in agriculture Peabody explained upon the old ground that there was no demand for agricultural graduates. The autumn before he resigned he suggested an innovation—the arrangement of an agricultural preparatory course of two years. It was to accept boys of fifteen or over, with a grammar school education, and give them a mixture of high school work and farm science; the students to rank as preparatory students and pay the same fees. This he thought might lead many to advanced work in agriculture, and would remove the reproach that the University was not stooping low enough to meet the agricultural classes. Similar experiments were on trial at the Universities of Minnesota and Wisconsin, and Peabody hoped it would satisfy the wants of many farmers' sons. But the expectations pinned on it came to nothing, though the course was tentatively arranged; and the success of the college had

to wait on the development of agricultural science, the growth of popular sentiment, and the choice of another dean than Morrow, who was able but lacking in administrative initiative. Morrow earnestly devoted himself to the farmers' institutes, and later to the short course.[1]

One notable advance in standards of graduation in Peabody's time consisted in the elimination of the anachronistic plan of graduating students by a "full certificate." When diplomas had first been instituted they had been given only for the completion of definitely-mapped courses; but Gregory had believed strongly in the student's right to choose his work where he pleased, and he conceded to those who had completed four years of irregularly elected studies a graduation by certificate of this completion. Peabody carried his opposition to the elective system to such lengths that certain deans were at much pains to circumvent his unreasonable rules. Moreover, it came to be seen that when students took the certificate rather than the degree it was usually because there was some deficiency in their work, so that it served as a detriment to sound scholarship and good discipline. Upon the Regent's emphatic recommendation, it was resolved that none be graduated by certificate after 1891. The number of graduates under Peabody varied between 26 and 55 yearly, with an average of about 40—one fairly creditable to the small institution. By the end of his administration nearly 700 out of the 2,600 matriculated since 1868 had re-

[1] Few texts could yet be used in studying agriculture. Single lecture courses were given upon The Elements of Agriculture, Agricultural Engineering and Architecture, Animal Husbandry, Rural Economy, History of Agriculture, and Rural Law (1888); during Morrow's frequent absences an assistant, Mr. T. F. Hunt, took his place.



NATURAL HISTORY BUILDING

ceived diplomas or full certificates. Of these, according to a calculation which took no account of teachers or women at home, 50 per cent. were engaged in technical pursuits, 9 per cent. in agriculture, 27 per cent. in the professions, and 14 per cent. in mercantile occupations. Two general surveys of the students showed conclusively that "at least three-fourths come from families that are compelled to observe a sharper economy in order that the son or daughter may go to college."

There was very little building done during the decade, though it closed with the substantial achievement of a grant for a drill hall and a natural history building, for both of which the Regent lobbied actively. Dr. Peabody's administration opened with the demolition of the old dormitory, which had always been an eyesore and had now become uninhabitable; following a storm it had to be taken apart to save it from destruction by the students. The authorities were at first alarmed that they could no longer advertise accommodations, and opened an agency for rooms in the Twin Cities, but as only one-fourth those offered were taken, a men's dormitory was never again proposed. Gregory had once wished that the University had never been burdened with one, and by now there was a considerable settlement about the campus. Up to 1888 only a few minor improvements were made. Grounds were purchased constituting the present sites of the metal shops and Natural History Building, and the arboretum or botanical garden and campus or "park" fenced.[1] A

[1] The park remained rather carefully gardened under Dr. Burrill's direction. We learn from the *Illini* that part of the shrubbery was cut into figures of implements or animals symbolizing the work of the colleges. The shops were given much new machinery, one of the important additions being a large testing machine which made possible the opening of the testing laboratory. Electrical apparatus was also purchased before

boiler house and chimney lifted themselves in the rear of University Hall, a blacksmith shop and foundry were erected, a testing laboratory was opened, and an industrial museum was begun on the top floor of University Hall. As for the Natural History Building, its plans were largely the Regent's own. As early as 1886 the coming of the State Natural History Survey inspired in him the hope for such a building, and for three years he studied eligible designs wherever he could find them, finally settling upon an approximation (never used) of the museum of the Jardin des Plantes of Paris. The cornerstone was not laid until during the interregnum after his departure, in 1892.[1] The drill hall, however, had gone up before he left, upon the design of Dean Ricker.

During the last years of the administration and the first following it the introduction of electricity was producing marked changes, electric lights supplementing gas in most rooms and an electric clock with attachments for bells supplanting an arrangement whereby a workman rang each recitation hour—when he thought of it. The library kept on at its snail's pace, containing in 1890 only about 20,000 volumes, besides pamphlets, and being so markedly deficient in some directions that the faculty were insistent on the need for additions. Expenditures for books, subscriptions, and freight combined—purchases were made through one firm, as McClurg's or Putnam's—averaged not over $1,500 yearly,

1888, and the equipmment of the mining laboratory cost several thousands. The industrial museum contained a number of objects from the exposition at New Orleans.

[1] There was some rivalry at the time between the colleges of engineering and natural science as to which should have the new building first. Dr. Peabody's plans for the interior of the Natural History Building were at first not at all pleasing to some members of the scientific faculty.

though Peabody requested in the end that $2,000 be spent for books alone. Michigan, Wisconsin, and other neighbors had all surpassed Illinois. As for the existing museum, the collections were greatly enriched by the accessions from the State Laboratory of Natural History, which brought with it 3,500 specimens of fungi, 11,700 fishes, 1,400 reptiles, and 42,000 mounted insects, with other material. The industrial museum contained Patent Office models, gifts from manufacturers, and some products of the shops.

The most important facts in the history of the University in this decade concern its relations with the State; for in this period the tide first began to turn, and popular indifference slowly to change to grudging recognition of Illinois as actually the State University. The initial advances in State esteem were made partly as a result of the growing momentum of the institution, but more largely by virtue of the strenuous efforts of the alumni, assisted by the faculty. Though Dr. Peabody always spoke of 1885 as the pivotal year, most people must have felt for several years afterwards that nothing had really yet been accomplished. Legislative criticism was as keen as ever, and the attitude of the newspapers as provoking. Thus in 1883 the *Illini* complained of the Chicago *Tribune's* hatred of the University, its gross ignorance and falsifying propensities; and in 1887, when a debate was going on between the *Tribune* and *Inter Ocean* as to the value of normal and university education, the *Tribune* still asserted that Illinois was only "a useful agricultural academy." But the advances were real if small, and were registered in many different ways.

Consistent efforts were made throughout Peabody's administration to advertise the University. In his first

year an exhibition of the practical work of the institution was placed in the Capitol at Springfield for the special benefit of the legislators, three large cases representing the activities of the students in agriculture, the sciences, engineering, and art and design. Encouraged by the press notices received, the University began appropriating more for advertising—$600 in 1884—and to carry on a steady campaign. Space was bought in the farm journals and newspapers, circulars issued to alumni, school officers, and the public generally, and an unsolicited article in the *Prairie Farmer* widely circulated. The University was represented at the New Orleans Cotton Exposition, at the Educational Congress at Madison, Wisconsin, in 1884, and at the National Education Association meetings. In 1887 it offered an honorary scholarship to each county, the holders to be appointed upon examination. "Our University," Peabody remarked in 1888, "is daily coming to be recognized as the State University of Illinois. . . . In many places where I have visited the schools public addresses have been delivered, the request being, Tell us about the University."

The slowly growing extension and experimental activities of the University had much to do with this newer public confidence, though, to be sure, they opened in an inauspicious way. In 1880 the Trustees had appropriated money for a series of experiments upon the products of sorghum cane, and these were diligently prosecuted by the professors of chemistry and agricultural chemistry, Weber and Scovell. A pamphlet was published on new methods of sugar manufacture, and fifty pounds of sugar were exhibited at a Chicago fair, both attracting much attention. But at this moment Peabody was amazed to hear from Weber that patents

had already been issued to him and Scovell covering the processes, or parts of them. He kindly but firmly protested, for he realized that if this action became known the public would harshly condemn the University. The rural population, as he told the Trustees, had been led to believe that these experiments had been conducted by its college, founded largely for its benefit, and designed to disseminate industrial information. It believed itself the proprietor of the information gained through the University's funds and equipment, and must resent sequestration of its property. The two professors protested, but the Trustees first condemned them, and in 1882, following opinions offered by the Governor and Attorney General, discharged them; it is good to know that, though they set up a plant in Urbana, they found no profit in the patents. But in extension lecturing, particularly in agriculture, the University perceptibly stimulated interest in itself. Morrow had little to do except devote himself to the farmers' institutes, and he did this with such zeal that in 1887 Peabody remarked that his teaching was suffering. A year later the Regent estimated that the number of agricultural, educational, and other gatherings attended by the faculty was over 100, and the number of addresses delivered over 200. In that spring alone the indefatigable Morrow had appeared at 31 farmers' meetings, and Prof. Forbes at nearly as many.

A notable gain to the instruction and to University prestige was felt when in 1884 Prof. Stephen A. Forbes came from the Normal University to teach zoölogy and entomology, bringing with him the office of State Entomologist. His other office as director of the State Laboratory of Natural History, which he had founded

in 1878, was transferred soon after.[1] A man of rare personality as well as scientific ability, he gave new life to the college of science—of which he became Dean in 1888—and to research activity. From his office three series of publications were steadily developed: two from the State Laboratory, one from the Entomologist's office. The first two volumes of the natural history survey of the State, covering ornithology, were ready in 1886; the first volume of the Bulletin of the State Laboratory to be published after the transfer to the University included articles by Burrill on Illinois fungi and by Forbes on Illinois fishes, and on the contagious diseases of insects. The entomological reports contained much of interest and value to farmers and fruit-growers, while both Forbes and Burrill prepared many papers for farm journals. The State Laboratory also furnished the public schools with specimens for use in natural history work.

But the two greatest steps in improving State relations were taken when the University's name was changed, and when the Trustees were made popularly elective. Though down-State alumni were enlisted both of these changes were planned and carried through chiefly by the very active Chicago Club of alumni, in which John Farson, the banker, J. F. Going, later a judge, Francis M. McKay, W. A. Heath, James R. Mann, and A. O. Coddington were the leading lights. The Regent supported the first move, but earnestly opposed the second.

The objections to the name "Illinois Industrial University," which, as we have noted, led the College Gov-

[1] A direct result of the accession of the State Laboratory was the addition of a professorship and assistant professorship in zoölogy, shared by the Laboratory and the University.

ernment to vote for a change under Gregory, were principally two. It was obvious, in the first place, that it was a misnomer for a broadly planned institution, and made it seem both narrow and eccentric, while depriving it of the full value of the State's name. In the second, a peculiar sense had become attached to the word "industrial" as applied to a public institution, and this sense was highly damaging. Since 1875 one commonwealth after another had called its reformatory or correctional workhouse for youths an industrial school, borrowing the euphemism from England. Some asylums for dependents bore the name. By the early eighties the University was thought by some to be a place where obstreperous youngsters were sent for safe-keeping, and by others a place where the poverty-stricken might come to work their way through school. Graduates, especially upon going to other States, were likely to be asked why they had been "sent up" to the institution, while the Regent was angered by such inquiries as the one contained in the following letter:

REGENT ILLINOIS INDUSTRIAL UNIVERSITY:—Will you please inform me if your institution will admit children and retain them until maturity? I have two boys, nine and eleven years old, and four girls, from two to nine years old. Buried my wife on the first of May last. Health is poor. I have no means for support of them, and I want to get them where they will be cared for together. Educated in learning and labor.

The number expressing such ideas was probably small even in the aggregate, but it was nettling to have such a misconception possible at all. And there were other impressions quite as erroneous. Many reasoned from the name that the University was one in which the State furnished a free education and the student paid

for it in work; and there were few students who were not asked many times how many hours they were obliged to spend in manual labor. Farmers, again, often had the idea that an industrial school was an agricultural school, and that alone. It is no wonder that the *Illini* once proclaimed angrily that "this is not a home for the feeble-minded, that hopeless reprobates are not received in charge, and that the dairy on the farm is not to supply milk to orphans." The only similar seat of the same name was the Arkansas Industrial University.

As the students became alumni they carried the dislike of the name with them, and as alumni they felt more and more impelled to have it changed. The Chicago Club, eager to assist the University in every way possible, had at this time set itself a tripartite program. Its members wished to dispel an ignorance so great that few in the Northwest, few even in the State, knew that Illinois had a University equipped to give "the best instruction" to a much larger number of students than it had; they wished to popularize the choice of the Trustees; but above all, they wished to alter the name of the institution. Their executive committee circularized all the newspapers, and the other alumni were reached and organized in a manner that would prove effective in the Legislature. Meanwhile, the Regent assisted by repeating his objections to the name, while the faculty carried the matter before the public in various ways. Finally, Senator M. B. Thompson, of Urbana, and Representative W. F. Calhoun, of Clinton, were intrusted with a bill drawn up by Mr. Going, of Chicago. This measure met with fierce opposition. Many of the University's best friends opposed the change, and the farm papers were unanimously against

it, crying that the industrial classes were being betrayed. Especially was the upper house hard to deal with, and Peabody sent to each Senator an assurance that no one had the remotest intention of altering the aims of the University, and that it had never better expressed the aims of its founders. But the bill passed the House in May, 1885, 106-21, and the Senate on June 10, 28-14.

The lamentation of the agriculturists was for a time great. The *Iowa Homestead* remarked that the sensibilities of the dude students were now cushioned, and that it only remained to substitute for the motto of "Learning and Labor" the words "Lavender and Lily White." The *Western Rural* declared: "If the University of Champaign, Illinois, is to become a shadow of the Greek and Latin mills, there is no need of its existence at all. We have better mills of that kind than it is or ever will be, and we have enough of them to satisfy the demand. If it wishes to convert itself into a dude factory, let it be informed that there is no place for it in this great agricultural State." And an old ex-Trustee, a large farmer, told Prof. Forbes that he now gave the University up—the industrial classes had lost it.

The alteration in the method of electing Trustees came two years later, though the Chicago Club had proposed it in 1885, when it had sent resolutions to Gov. Oglesby recommending the appointment of Mann as Trustee, and had corresponded with Cornell to learn how the choice of alumni to representation on the Board had been achieved there. Many of the faculty, all the alumni, and all the students supported the innovation, for they believed, in the first place, that it would result in the choice of more alumni as Trustees, and therefore of more men directly interested in the University; in

the second, that public balloting upon the Trustees would stimulate the general electorate to a greater regard for the University. Peabody stood firmly against it, on the ground that it would lead the University into political complications. He also obtained statements from Senator Cullom, Congressman Cannon, the Governor, and most other State officers of the same fear, and a testimonial from President Angell that a similar arrangement had worked badly in Michigan. But some thought that he was partly moved by a desire to retain his old privilege of suggesting appointment to the Governor, and thus controlling the Board. Out of the controversy rose the first keen dislike for him by the alumni, the first strong feeling that he was a reactionary. Henceforth the slowness of University progress, already irritating to many, was more generally laid to him. The bill, framed by Charles G. Neely, was triumphantly carried, and it proved an unequivocal benefit in bringing the University home to the citizens.[1]

One other way in which the University progressed was in dispelling the queer prejudice that it was irreligious. That this notion should have gained some currency was traceable to the efforts of the sectarian colleges in the sixties to show that any State institution must be a hotbed of atheism. None but the bigoted believed it, but these bigoted were not a few. The University made much of the work of the Christian Associations and the local churches, and Peabody spoke against Darwinism. But its chief vindication came in the famous Foster North case, which dragged

[1] Mr. F. M. McKay, Mr. Stephen Reynolds, and Senator T. L. McGrath, the first two alumni, assisted the bill's passage in the Senate and House in April and May, respectively, 1887. Gov. Oglesby was so opposed that he let it become law without his signature.

through the courts for some time. Since its opening, the University had required attendance at daily chapel exercises, the men being marshaled according to the cadet organization. In the spring of 1885 North, who had been a student in a desultory way for six years, suddenly absented himself from chapel, and denied the University's right to compel his attendance. As he refused to plead any conscientious scruples, he was promptly suspended. He petitioned for readmission, whereupon the faculty obtained an opinion from the Attorney General that its action was a just piece of punishment for insubordination, and refused his request. All his efforts to defeat the University at law failed, and the case was meanwhile sufficiently aired to give Illinois—despite the fact that it was no longer headed by a minister—somewhat the appearance of a defender of religion.[1]

The farmers who had lost faith in the University in 1885 were much assisted in regaining it in 1887, when plans were promptly drawn up to erect a true agricultural experiment station with the funds carried by the Hatch Act. The nine directors of this station were to be appointed by the Trustees, one to be the Regent, at least two members of the Board of Trustees, and others representatives of the State Board of Agriculture, State Horticultural Society, and State Dairymen's Association. It was regarded as a department of the University, with the land and equipment of the institution at its disposal. At the outset it was determined that four principal inquiries should be determined: into the culture of the cereals and grasses; into the feeding of meat animals; into the feeding of dairy cattle; and into orcharding

[1] Nearly thirty years later, in 1914, North was prevailed upon to return to the University for his degree, which he refused!

and the culture of small fruits and garden products—all this to be under the joint supervision of Burrill and Morrow. By the end of this year over sixty distinct experiments were being conducted on the so-called north farm—much the present site—and the results of one on ensilage feeding had been published and distributed in bulletin form to 10,000 farmers. The station arranged a method of coöperation with the State Laboratory of Natural History, and at once began to build up its own library and periodical room. Certain special studies undertaken by the college of agriculture were of course continued independently. Before the close of Peabody's administration the station had begun experiments elsewhere in the State, conducted an exhibit at Peoria, and published more than a score of bulletins.

The relations of the University with the high schools developed slowly, though Peabody had their strengthening much at heart. Early in his administration he remarked that the accrediting system had given the University little aid, and that though in seven years 156 students had been admitted on their diplomas, 118 came from the three schools within sight of its towers. His own repeated visits to examine high schools convinced him of their pitiable state, and he reported that the very name often meant no more than that the school was the highest in the community, and that there were many district schools offering better instruction than some that claimed secondary grade. Only at the close of his administration, with about sixty accredited or partially accredited high schools, did the situation seem to be rapidly improving. In 1884 the examining high schools were abolished; the distinction which three years later was drawn between the partially and fully accredited schools arose mainly from the fact that a difference

had to be made between those whose graduates were admitted to all departments and those which commanded admission only to the colleges of agriculture, engineering, and natural science. Many high schools did not then give Latin, and after experimenting with a system by which "lit" students could make this up in the academy, Peabody decided that the best kindness to the school system was to demand it firmly.

The development of the preparatory department is the development of entrance requirements in this period, for it was consistently stated that all matriculants in colleges other than literature and science must pass examinations in its studies. It was invaluable, both because of the lack of high schools and of the great number of youths who had outgrown physically and mentally the high school age. The intent was always to make it a place for students of eighteen to twenty-one years. Peabody expressed in 1888 a wish to expand the course from one to two years, as this compression of work was too hard for the younger registrants; but this was impossible without a separate building and a full and separate corps. The teaching personnel was made up by drafts on the University faculty, Professors Rolfe, Butler, and others repeatedly serving. During most of the decade the course was divided into two parts, the first preliminary to the two technical colleges and science, the second to literature and science. There was no Latin whatever in the former, but there was English composition, which the latter did not have; and Greek was not required, as it was for the school of ancient languages. Algebra and geometry were taken by all, and physics, physiology, and botany by most. There was no change in the curriculum, but a gradual stiffening of its standards. Though the University

recognized in the academy its chief feeder, it always viewed it with disfavor, and in 1890 it was recommended that it be closed as soon as some neighboring institution could be induced to take up the work.[1]

Transcending in scope the University's relations with the State were those it established, through its increasing and more and more loyal alumni, with the entire section. Of the three thousand students who had left the University by 1890 with some real sense of debt to it, probably nine-tenths remained west of the Indiana line and five-sixths in the upper Mississippi Valley. An Alumni Association began actively functioning during the decade, and was helpful in more ways than one. In 1890-91, under the presidency of W. A. Heath, it undertook the compilation of an alumni directory. It planned a number of reunions, culminating in a grand banquet in 1890, the twentieth anniversary of the completion of the first year. The legislative activities of the Chicago Club we have noted, while it did so much to make students leaving the University feel at home in the city as to be commended several times by the *Illini*. Near the close of the decade were formed the Nebraska Alumni Association, with offices at Lincoln, and the Southwestern Alumni Association, centering about Kansas City, while in 1891 the Northwestern Alumni Association of Tacoma was organized. All were loyal bodies, though only the Chicago Club went so far

[1] There were times when the "preps" (who included many, however, with but one or two studies to make up) constituted nearly one-third the total attendance. Such were the years ending 1885, with 107 "preps" out of 332 students, and 1889, with 121 "preps" out of 417. This hardly reflected an improvement in the high schools, yet there is no doubt that the attainments of entering freshmen grew better. Peabody accused some high school principals of desiring to have their schools accredited rather as a certificate of good character than for the convenience of prospective matriculants.

as to have its members use stationery bearing a vignette of University Hall.

In students' affairs the decade was one of the rapid growth of a number of new interests: the multiplication of clubs and societies; the beginning of new publications; the first attention to athletics; the first vigorous work of the Christian Associations; the determined persistence of fraternities; the development of a social life of some variety, marked by a spirit in the relations of men and women students which has been ever since typical, and the partial escape of matriculants from a thoroughly utilitarian application to study and strict amenability to the faculty into a freer atmosphere. Student life really found its beginnings, and meant something more than an existence centered in the happenings of the dormitory, the College Government, and the literary societies. The unhappiest feature of undergraduate history was the constant dislike of a large part of the student body for the Regent, who, though really kindly and sensitive, was of cold and austere bearing, lacked magnetism, and could not break down the barrier of reserve which seemed always about him.

Both the passing of the College Government and the abandonment of the dormitory meant the destruction of a centralizing influence. The former had seldom been more than a political plaything to many students, and its success had varied greatly from year to year. The courts "were good when they were good, and when they were bad were awfully bad."[1] Tickets came to be elected on a tacit question of the strict or lax enforcement of the laws, and the student dislike of officiousness made it inevitable that those representing laxity

[1] Thus Dr. Peabody remarked, Board Report, 1888, pp. 201ff.

should get the upper hand. A cartoon in an undergraduate publication justly exhibited the government as a very creaky skeleton, its limbs moved by wires pulled from behind a partition. Another influence strengthening the opposition to it was the tendency of fraternity men to try to use its office to their group ends. Soon after Peabody's installation, finally, the Attorney General rendered a decision greatly limiting its powers of discipline. Peabody withstood all attempts at a summary overthrow of the government, but he believed that it was worthless unless sustained by the earnest sentiment of a majority. As it became more and more impotent, its friends gave up hope, and in 1883 an election was held to decide the question of its continuance. The vote was 110 against it, and 70 for it, with 120 not voting; and the faculty promptly recalled into its hands all the authority delegated the government.

The most interesting feature of student life under Peabody was the struggle against fraternities. Before his inauguration the chapter of Delta Tau Delta was dormant, though not so much so but that it could easily have been awakened. But early in 1881 a chapter of Sigma Chi was organized, numbering some of the best-known students. These men always maintained that the Regent was consulted before the organization of the fraternity, and that he countenanced its formation; certainly the *Illini* and local papers gave prominent space to the chapter's first ball, and the members wore their badges. When college reopened in the fall initiates were pledged, and the future seemed so bright that other groups forwarded petitions to Beta Theta Pi and Phi Gamma Delta. But Peabody was meanwhile alarmed, and in September had placed the matter before the

Trustees. That body, retaining the hostility to fraternities acquired under Gregory, directed him to stamp out the bodies, and as soon as possible he called the members before him and informed them of the ban. The badges disappeared, but in a few weeks he learned that a committee was present from an Indiana college organizing one of the chapters petitioned for. No less than four fraternities, it transpired, were in being or about to come into being. The faculty accordingly passed a rule that after the new year no student might receive a class card till he had deposited with the Regent his pledge that he would join no college secret society so long as he was a student; and that no student might receive honorable dismissal or a diploma until he had deposited a statement that he had not been a member of any such society since the date of his pledge. This step followed a Princeton precedent, and was quite legal. Those already members of the societies were permitted to retain membership provided they were not active.

Yet Sigma Chi managed to live, for its charter was held by resident alumni who retained the semblance of an organization through the troublous years that followed. There had been in existence for some time at the University a mysterious body called the "Ten Tautological Tautogs," originally a burlesque on secret societies. Its motto, "*Bono ostrea in sono ventre*" (*sic*), indicated its gluttonous proclivities, and its personnel was an absolute secret. It happened at the opening of school in 1882 that the only returning Tautogs were Sigma Chis. The chance was too good to be missed; the Tautological body was made a vehicle for keeping Sigma Chi vicariously alive in college, and after leaving college the postgraduate degree of Sigma

Chi was conferred on all Tautogs. As the members had asked Dr. Peabody whether they fell under the anti-fraternity ruling, and he had assured them that they did not, they had no qualms of conscience. New blood was kept constantly running through the Tautological club. Regular meetings were held, and made known to the public through the subsequent distribution of programs. These called up a vision of Pickwick, Artemus Ward, Confucius, Lo, the poor Indian, Baron Munchausen, Shakespeare, Don Quixote, Dr. Johnson, Mohammed, and Victor Hugo feasting on a long list of delicacies, and vying in nonsensical discourse. In reality, the fraternity men were consuming bread, cheese, and beer, and singing "Michael Roy" at the tops of their voices.

In 1885 the council of Sigma Chi addressed a letter to the Trustees, with eight reasons why the prohibition of three years before should be dropped. A petition was also circulated with some success among the students, while Walter L. Fisher, later Secretary of the Interior, appeared before the Board in behalf of fraternities. But many of the students were opposed to the movement—the *Illini* condemned it strongly—and Peabody remained very hostile, so that the Trustees killed it in committee with asperity. By some arguments of the national council they were much offended. Sigma Chi had referred to its belief that a former secret society had continued a desultory existence at Illinois, and had somehow conveyed an insinuation that the Sigma Chi authorities encouraged the violation of student pledges by accepting those who had broken them. They had further offered the most impolitic threat that if defied they would use their influence with the Legislature to defeat the University appropriations.

Indeed, feeling was running high. The fraternity element was greatly strengthening the general alumni element dissatisfied with Peabody, and the two together were beginning to think of using their strength.

Thus affairs stood, so far as the rule went, till the fall of 1891. In September, at the first Trustees' meeting after the resignation of Peabody, a sensible motion was introduced that the pledges theretofore required of matriculants and graduates be omitted, and the subject of fraternities be referred to the committee on rules. Thus were the bars let down, for with Peabody departed all narrow hostility to the bodies. That autumn Kappa Sigma was established, and that winter Sigma Chi brought back, while in 1894 Delta Tau Delta was fully revived. The pledges in the Regent's office were publicly burned. Late in 1892 Burrill reported that the young women had been given permission to establish a chapter of a sorority, but no use of it was made till 1895.

Athletics developed but slowly in this period. For years the University, as the students complained, did nothing to encourage physical sport; the gymnasium was so bare that a horizontal bar and a spineless spring board long stood lonesome suggestions of a possible equipment. A few intercollegiate contests in the early years soon led to the formation of a College Baseball Association among such small institutions as Knox, Monmouth, Blackburn, and Lake Forest and the University, with almost no games, however, except at the time of the annual oratorical contest of these colleges. A typical early gathering was that of October, 1884, at Lincoln. Perhaps 150 students gathered from the various institutions, the University delegation, the largest, coming in with music on a train the engine of

which had been decorated. A banquet was held at one of the hotels, with toasts; the next afternoon Knox and the University were matched in baseball, Knox winning; and in the evening came the oratorical contest, Illinois taking third place. This was the great event of the year for college students in the State. Early in the decade an athletic association was also formed, which by 1886-87 was managing a glee club and athletic entertainment and an annual field day among the classes. Baseball games increased, but not till the close of the administration was a football eleven organized—the first eleven going to Purdue in 1890 on invitation of President Smart, and being beaten, thanks to an Indianapolis coach serving at Purdue, by 62-0.

In the spring of 1891 the athletic association was given permission to inclose and occupy a part of the north campus, and was allowed $350 for improvements. It also raised money by a minstrel entertainment, and so much interest was shown in the games played that Burrill commented on the fact. That fall the eleven employed its first coach, a Purdue man named Robert Lackey, and at the tournament of the colleges at Monmouth it swept the field in sports, celebrating so lustily as to clash with the police. By this time the rising enrollment was making the University's opponents seem puny. There was therefore great joy when in the following spring it was elected a member of the Western College League, a more robust organization, including Northwestern, Washington, and Purdue Universities. At the same time, better gymnasium facilities were afforded in the drill hall, and student-instructors hired.[1]

[1] In 1888-89 we find Lieut. Hoppin, of the military department, acting as a semi-official director of physical training, with 110 students in the gymnastic classes, and a daily attendance of half this. His work was carried on in the old drill hall, for

Interest in the intercollegiate oratorical contests waned as that in athletics waxed, and as Illinois was lifted above the small colleges. The Regent had early suggested the University's withdrawal from them, partly because the contests cost so much time, partly, perhaps, because of its rather bad rank. But after Brownlee's coming everyone was rejoiced by the capture of first place by an engineering student, to whom, in an excess of gratitude, one of the *Sophographs* was dedicated. The college orations, highly formal efforts on large themes, were reprinted in all the college papers; sometimes a wealthy judge or banker would be so struck by one from his own section that he would have many copies neatly published. Even as Illinois was making this better showing abroad the home interest in oratory and debate continued to decline. In 1885 the *Illini* found fault with the literary societies as stolid, commonplace, and not really literary. The increase of engineering students over those in literature was one of the reasons for the decay of forensics, yet next year the *Illini* lamented that even the women did not maintain their literary bodies. A little later the abandonment of the Junior Exhibition and Senior Class Day was contemplated, and in 1888 the faculty had to supervise the former. The following year it was converted into an oratorical contest, and this was so satisfactory as to be repeated for some years, an alumnus offering generous prizes. The literary societies made their first attempt to arrange a lecture course jointly in 1883, and after many vicissitudes finally made in 1891 a perma-

which the students purchased $125 worth of equipment; those using the gymnastic apparatus paid fifty cents a term for tickets, which went to pay student instructors.

nent attraction of the venture, calling it the Star Lecture Course.

The chief change in the field of student publications lay in the introduction of class year books. In 1882 the class of 1884, after some debate as to whether it should not wait till its junior year, brought out the *Sophograph,* a manila-bound volume of meager dimensions and scrappy contents. It reflected student interest in the fraternity question and interclass hostility, and little else. The next year the following class called its year book the *Saturnian,* but the original title was at once restored. There was a steady attempt thereafter by each class to better the work of its predecessor, though none really succeeded in converting the annual into a genuine record of its membership and activities. Nearly all had cartoons, and in the later years some did not hesitate to caricature the Regent. Finally, in 1894, in deference to the general opinion that the sophomores were too immature for the annual, the juniors brought out the first *Illio.* The *Illini,* which had just become a semi-monthly when Dr. Peabody was installed, continued to be published on the second floor of the old Military Hall, and to fight against a too highly literary content. In 1886, having passed from the hands of the Student Government to those of its subscribers, it acquired a new cover ornamented by figures symbolizing letters and science. Under Dr. Burrill it became a weekly, and began printing news stories, even with headlines, while one enterprising editor offered a course in Volapuk—but the stories and essays remained.

The growing variety of student interests found expression in a greater and greater number of societies. Most prominent of these were a cluster of scientific or

technical organizations which came into being halfway through the decade—the natural history society, the agricultural club, and clubs for the civil and the mechanical engineers and the architectural students. In 1887 the civil engineering club was sufficiently proud of the papers read before it to publish a thin volume of them, and a year later it added a second; in the third year the mechanical engineering club joined with its fellow, and the first volume of the *Technograph* was published. Some of the papers contained in it were the theses that all engineering students had to present, and embodied researches that attracted the attention of technical publications outside. The political science and Blackstonian clubs speak for themselves; the military band as yet amounted to little, and glee singing to less.

Though the first college Y. M. C. A. in the State had been organized at Urbana in 1872, and had met regularly, it gained little influence till twelve years later, when it issued its first handbook. Later the young women organized a Christian Association, and immediately after Peabody's resignation the two undertook to raise $25,000 for a building, with unlooked-for success. Following a series of meetings in 1892, within twenty-four hours 150 students pledged over ten thousand dollars—and those were days when Illinois students were still poor! Dr. Burrill actively assisted the campaign, and within a few weeks the total had been brought above fifteen thousand, or five times enough for the purchase of a lot east of the Engineering Building. Though pledges were soon after still further increased to over twenty-five thousand, the panic of 1893 made collection difficult, and no plans for building were made.

Class rivalry found much rougher expression in the later years under Dr. Peabody than under Gregory, for

the simple reason that class lines were now definite, class traditions had crystallized, and the growing registration made division into groups natural. By this time long-standing precedent called upon the sophomores to break up the freshman party and to dump the cadets' cannon into the Boneyard. The freshman party was a dinner and dance held in some local hall: the second-year men would steal the best clothes of the newcomers, would break a jug of molasses over the steps, would cut off the gas, would throw "eye-water," a chemical exciting the lachrymal glands, or would boldly kidnap the Freshmen. When order became bad in the closing days of the Regent's term these methods were transferred to break up the junior and senior oratorical contests, and the chapel exercises. Insubordinates would fasten phials of "eye-water" to the fronts of their heels and break them upon the rungs of their chairs at a signal. Their success was such as to contribute much to the end of the rather unpopular regency. The first class rush occurred in the autumn of 1891 in the corridors of University Hall, and was wholly spontaneous. The clothes of many were stripped off, and the fight did not end until the heaviest student—George Huff—having climbed for safety to one of the chandeliers, broke it off at the ceiling and came down with it upon the heads of his battling fellows. This contest was followed by a number of expulsions.

In military affairs, Peabody's first care was to make final adjustment of the cadet rebellion bequeathed him by Gregory. At his instance, the Board provided in the spring of 1881 that students in the senior class should be excused from drill, and that each spring the faculty should examine candidates for nomination to the Governor for National Guard commissions, without

limitation of their number. Juniors did not drill that spring, and feeling rapidly quieted. Indeed, a few years later the only complaint was that too little interest was taken in the department. The *Illini* thought the slouchiness of the companies disgraceful, and commented on the eagerness of everyone to skip drill. For a time the cadet corps seemed dropping to the plane of indifference and dislike that it now holds in many land grant universities. But in 1891 the course of affairs was interrupted by a yet more serious military rebellion, a principal agency in the ending of Peabody's regency.

At the beginning of the January term it was discovered that W. G. Miller, a junior, captain in the battalion, was deficient in scholarship. He was allowed to continue his studies, but under a rule which had theretofore been laxly enforced was relieved of his command. A reëxamination left his average grade still below the mark required. The sophomores and juniors thereupon protested, reminding the faculty that Miller had been a good student, that other men who had failed had been treated with more leniency, and that his removal deprived him of chance for a State commission. When the faculty remained obdurate, all the officers handed in their resignations, with the threat that they were final unless Miller was reinstated. This happened in chapel, where the company ranks were thrown into confusion and the halls were for some time in an uproar. The faculty, which had collective charge of discipline, blundered in treating this insubordination. It acted properly in requiring an unconditional withdrawal of the resignations and of the threat demanding Miller's reinstatement. It twice interviewed all the officers, and the latter, after a series of meetings, decided in the main to yield. But it was needlessly harsh, and when two

captains refused to withdraw their resignations, it suspended them for the year. At once there was another burst of excitement, the whole student body now feeling that the Regent was treating them unjustly.

The student leaders determined to carry their case before the Trustees, and the faculty strangely interposed no objection. A mass meeting was held at the local opera house, where most undergraduates signed an argumentative petition asking the Board to investigate and to restore the two captains. The faculty, in a statement to the Trustees, had meanwhile explained that they had suspended the two men because of the grossly offensive way in which they had presented their resignations, and because they had remained insubordinate. "The true reason," recited the petition, "was because they would not acknowledge a wrong they could not see, and withdraw a resignation they claimed a right . . . to present, and, in fact, disclaim any right to protest against anything they believed to be unjust and partial." At the Trustees' spring meeting committees of the faculty, under Peabody, and of the students, under C. A. Kiler and others, presented the two sides of the controversy. The students forced the Regent to admit, in the first place, that there had been no less than fifty cases in which officers whose scholastic standing fell below the average had been allowed to continue in command, though Peabody denied that there was any injustice in the special action against Miller. They affirmed, again, that the two captains had offered to resign in any form that might be prescribed by the faculty—for resignation, if properly done, was an undoubted right. This Peabody contradicted. In the third place, the students entered complete denials of three accusations by the Regent: that the two cap-

tains had deserted, that they had tried to coerce the faculty by their resignations, and that they had made no effort to place themselves in a proper relation with the faculty. The Trustees spent a whole day hearing the case, in which the faculty was plainly largely in the right, but which showed how wofully Peabody had lost his control of the University.

The decision was outwardly a compromise, but virtually a victory for the students. The Board ruled that the precipitation with which the officers presented their resignations and the confusion into which they threw the classes were unintentional. It found that the faculty had acted in proper form in suspending the two captains, and that it had enforced the rules for student discipline with reasonable impartiality. But it stated that it believed that the students were largely unacquainted with these rules, and that their action was therefore expressive of ignorance, not thoughtlessness. The two captains were to be restored to their places, and the rules of discipline henceforth to be posted conspicuously. As Miller had already resumed his studies with a view to restoration in the battalion, nothing was said of him. Small wonder that the *Illini* appeared showing a rooster rampant beside the figure of a soldier! And the Trustees' action represented a victory for the discontented alumni as well as for the students. There were at this time three graduates upon the Board —S. A. Bullard, George R. Shawhan, and Francis M. McKay, who had taken their places in 1889, 1887, and 1886 respectively; and Mr. Bullard was president. Two, Bullard and McKay, had been elected as a direct result of the alumni movement for representation, and both emphatically shared the feeling among many alumni that the time had come for a more progressive head than

Peabody. Their influence, and the fact that student feeling was so thoroughly roused as to threaten an injury to the University, made the Board willing to seek a settlement that was outwardly a compromise but really humiliating to the Regent.

After this, it was virtually impossible for faithful Dr. Peabody to remain longer. His control over the students had for some months been so tenuous that he was hissed as he passed through the halls to his office or stood in chapel. When he had returned from Europe his first address had been so interrupted that he burst into tears. As the University had grown more complex, it had more and more become too great a burden for his conscientious, systematic, and inelastic abilities. The man who made out all class cards and final returns of grades himself, who for years went without a secretary, who had no typewriter and no other mechanical office aids, who made the University finances the subject of meticulous care, found the press of work gradually too much. His health was breaking by the end of the year; he could not sleep, and the consciousness that he was not in harmony with students, alumni, or Trustees robbed him of inclination for his duties. At the June meeting in 1891 he was renominated, but the Board tied, five members, including two alumni, voting against him. The meaning was plain; and after requesting that a statement of the side of the faculty in the recent "military rebellion" be read into the minutes along with the documents which the students had presented, he resigned. A committee was appointed to find a successor. It was doubtless with relief that he laid down his burden in the fall, for a position was waiting him as director of the liberal arts exhibit at the Chicago World's Fair.

IV

AT THE TURNING POINT

Burrill's Steadfast University Service. Improved State Support. University Expansion Upwards. The Extension Experiment. Summer School and Graduate Work. Liberalization of Student and Faculty Life. Various Innovations.

For the next three years, from September, 1891, to the same month in 1894, Vice President Burrill acted as Regent, bringing to the place experience he had gained as temporary head during one of Gregory's absences in Europe, during the months following Gregory's resignation, and during a long vacation which Peabody had taken for his health. He had the advantage of familiarity with the institution from its beginning, and of holding the complete trust of students and faculty. His relations with the last body, indeed, were of necessity cordial, for though he held and usually exercised complete powers as an executive, most administrative problems were considered by the faculty as in committee, and many settled in this coöperative spirit. The years were years of unprecedented growth in every direction. The beginnings of this growth, to be sure, had come in the closing days of Peabody's administration, and Burrill, loyal to his old chief, always made this clear. But progress was obviously much more rapid after he took the helm, for an entirely new spirit was breathed into all departments, and for the first time the University had both opportunities and a head with imagination enough to make the utmost of them.

The four outstanding features of Burrill's administration were the wresting of unprecedented appropriations from the Legislature, the opening of the graduate school, the first sessions of the summer school, and the attempted development of extension teaching. The increase in the number of students was great, but may be regarded as a natural outgrowth of existing causes. In June of his first year Burrill reported that 583 students had been enrolled, 64 more than the year before. In 1893 he reported a total enrollment of 714, or 141 more than before. No other prominent university, he claimed, had ever made such large gains in attendance, though the increase at other Western institutions was at this time remarkable. The year previous, the *Illini* had reproached the University with the fact that there were over three hundred Illinoisans at the University of Michigan; now at last it was beginning to absorb the youth from its own State. In the year ending 1894, this total was maintained, 718 students being enrolled. The college of engineering gained most in this, electrical engineering in particular leaping up nearly 200 per cent. The gain the last year would have been greater but for the attractions held forth by the University of Chicago, which, with a rich endowment and a faculty of unusual strength, had suddenly come into first place in the State in number of registrants. A slight factor in the new enrollment at Illinois was perhaps the confidence which the people reposed in the acting Regent, whose activities in connection with the experimental farm had made him familiar to them.

The great leap in appropriations was the result of bold demands made by Burrill, and of the increased friendliness of the State Administration, now headed by the radical Democrat, John P. Altgeld. The acting Re-

gent had no patience with the older practice of asking for the bare necessities of existence, and in early 1893 induced the Board to put in an application for not less than $551,500. Of this the largest part was for buildings—a library, an engineering hall, and a museum. As the Democrats had proposed to make a record for economy, the University watched the reception of its request in Springfield with much trepidation. The Senate committee more than justified its fears by voting to eliminate the amount for new buildings and to reduce the general funds to the old figure—that is, to report a bill for $96,000. Fortunately, Henry M. Dunlap, an alumnus, had been newly elected to the Senate, and was able to have the chairman defer reporting the bill out on the floor, and to bring the pressure both of Burrill and of Altgeld to bear. He threatened also to attack the Democratic committeemen as preferring to spend money on penitentiaries rather than on education. A second committee meeting was as friendly to the University as the first had been hostile, and the body finally recommended the $120,000 asked for expenses of instruction and $160,000 for an engineering hall. The measure as passed therefore carried a total of $295,700, or more than twice as much as ever before.

This permitted both a large increase in faculty and fairer treatment of faculty members. In the winter of 1892 Burrill had reported the instruction as given by 26 of professorial grade, and 12 subordinates, all hard-working and ill-paid. The next fall he reported as against this total of 36 a faculty of 48—an increase of one-third. The annual salary roll had been $61,445, and was now $76,080, of which $3,850 represented not new but increased salaries. New departments had been formed in philosophy, economics and sociology, physiol-

ogy, and physical culture for women, while pedagogy had been given a separate head, and for a time figured as a distinct "course." A year later there were 71 names on the faculty roll; among the accessions at about this time were David Kinley, T. A. Clark, E. J. Townsend, A. H. Daniels, L. P. Breckinridge, E. B. Greene, J. M. White, and D. K. Dodge. Practically the present system of faculty grades was adopted, while early in 1894 a Trustees' committee on salaries drew up a scale by which deans should be paid up to $2,500, professors up to $2,250, associate professors up to $2,000, and so on. Above all, Burrill was insistent on the grant of a new freedom to professors. They were not now engaged or discharged in June, but March, so that they could terminate old contracts in the one case or hunt new positions in the other. The senseless, little-heeded rule requiring a grant of leave for absence in vacations was repealed. A sabbatical year on half salary for full professors was recommended, though Burrill admitted that there were insufficient funds for this. Through the appointment of committees with standing duties, the faculty was given a share in the administration at which Peabody would have gasped. As for teaching, henceforth Burrill directed that every effort should be made to make the professor feel "that those in authority have faith in him, and that he is to be judged mainly by results."[1]

When Burrill took office, an entirely new organization had already been planned. With the money from the Morrill Supplementary Act in prospect, announcement

[1] The enlarged faculty brought men from all over the country, and their experience with academic methods and outlook elsewhere removed from the University's administration a certain parochial quality that had marked it.

had been made for 1891-92 of a division of the colleges into courses (really departments) not schools, and of additions to the number of these courses. In engineering the electrical courses were made a new department. In literature and science four departments had been announced—English and science, Latin and science, ancient languages, and the school of philosophy and pedagogy before referred to, which was placed under Charles DeGarmo, soon to become president of Swarthmore. Latin and Greek, French and German, had been completely disentangled. Enlarged instruction had been offered in physics, and other scientific studies arranged more logically. One question of policy which this expansion raised Dr. Burrill dealt with in the sensible way. "Shall the departments be divided to such an extent," he asked, "that the chief can give all or most of the instruction, or shall he have associate and subordinate assistance in a larger subdivision of the University? The former plan has prevailed heretofore. It seems to me that the latter is now, at least, the better plan to adopt," and adopted it was. Before the end of the interregnum, with electrical engineering had been added a department of municipal and sanitary engineering, under Prof. A. N. Talbot, and courses in architectural engineering. On the other hand, under Burrill the course in mining engineering came to its end for the century. After the reorganization of the department in 1885, having been operated with little success for four years, it was, on the resignation of Prof. Comstock, allowed to lie dormant. Prof. Baldwin's acceptance of the place two years later gave Burrill opportunity to recommend specialization in coal mining, but the merest handful of students elected the work, and in 1893 Baldwin resigned in disgust, declaring that the

University's surroundings precluded any development of it.

The increase in curriculum made possible two innovations: the change to the elective system and the founding of the graduate school. In the colleges of natural science and literature and science a considerable freedom of choice was now, in obedience to a national trend, allowed—a few subjects only being required; while in both colleges students could pursue specific branches farther than before. Three years instead of one or two might now be given to botany, zoölogy, French, German, and Greek, while Spanish and Italian were added anew. The liberalization of the colleges went on till matters were on much the same basis, considering the limited facilities, as now. It may be added that in 1893-94 the preparatory school was reorganized with a principal, its own staff, and two years' work.

Graduate courses were advocated by Burrill as soon as he entered upon the acting Regency. Even a few graduate students, he thought, would give a new quality to undergraduate work, would add to the reputation of the University, and would furnish a corps from which assistants might be chosen. Research, too, would be stimulated in a way valuable to the teaching force. In 1891-92 the graduate school was instituted, and two years later placed under a committee consisting of Regent and deans. Already the University had given masters' degrees on a loose requirement embodying the presentation of a thesis, and it now provided that after 1894 these be granted only to those who had completed a prescribed course under the direction of the faculty, and equivalent to one year's work on full time. Graduates of Illinois, but not of other institutions, might study in absentia, and receive degree after three years.

During the first year there were eight graduate or pseudo-graduate students, during the second nine, and during the third twenty-two, of which last group ten were doing true graduate work—that is, advanced study on the lines pursued as undergraduates. In this third year conditions were published upon which a doctorate in philosophy might be conferred, but for a long time no candidate was enrolled. This prompt initiation of advanced study is an indication of the intellectual ambitions and ideals which had been growing in fervor during the outwardly discouraging last years under Peabody.[1]

The experiment in extension work was brief and abortive. Five years before Burrill took his seat university extension was first brought to America from England, and described at a library conference at Albany, New York. In 1889 Columbia announced elementary courses in science for teachers in or near New York, in 1891 the first State appropriation—$10,000—for university extension was made by New York, and the same year work was begun by an American Society for the Extension of University Teaching organized in 1890 in Philadelphia, under the presidency of Dr. E. J. James, of that city. The subject had been much discussed all over the country, the faculty was eager to attempt it, and the Trustees were acquiescent. In the late autumn of 1891 a meeting was held in Chicago of representatives of a number of Western institutions—Chicago, Northwestern, Beloit, Lake Forest, Wisconsin, Wabash, and Indiana—with Illinois represented by Burrill, Forbes, and Moss. An extension association was formed; but it was decided that each institution should be left free to act upon its own adopted methods. The association was to

[1] A small number of fellowships were granted at $400 each.

serve merely as a central bureau, advertising and coordinating the whole, and to a limited extent making arrangements with local centers. Each institution was to submit the names of its lecturers and their subjects, and the towns and cities of the region were to be given, so far as practicable, their choice of the whole. Already Illinois had made some arrangements for a lecture course in the Twin Cities, and the Trustees now granted $500 for preliminary expenses. By the spring of 1892 a small beginning had been made. Various professors had lectured in chapel before the townspeople. Butler, of the English department, had gone to Oak Park, Chicago, Rockford, La Salle, Rock Island, and elsewhere; and other faculty men had appeared in various centers. In all, a thousand people were computed to have attended twelve different courses; while some work was also done at the annual county teachers' institutes.

For the next year twenty-one courses were offered, ranging from household chemistry to Greek literature. The one year builders' course in elementary architecture had just been discontinued; but a determined renewal of former efforts to reach young farmers was now made in the institution of a short winter term course in agriculture open to all over eighteen years of age, and attended the first year by more than a score. Yet despite the fact that a special circular was published for the extension work, it did not thrive. Some of the obstacles were those met in other institutions at the same time—insufficiency of funds, the inability of all teachers to adapt themselves to their audiences, the inadequacy of the general administrative plan. The Trustees authorized active measures to revive a flagging public interest, but they refused money for a University ex-

tension magazine, and so few applications for courses were received that the faculty gradually let the whole scheme lapse. One special obstacle would indeed have been hard to overcome—the fact that the full energies of the faculty were required by the demand for more work at home. Though two of her neighbors, Wisconsin and Chicago, went on to make of extension work a great success, Illinois found her farmers' short course alone a permanent feature. In 1893-94 the faculty turned to plans for a summer school to be held during the vacation of the latter year.

In the form in which these plans were approved by the Trustees, they called for instruction in English, several of the sciences, mathematics, the social science, pedagogy, and psychology. The term was to last four weeks, and to cost $10 in tuition; $1,200 was appropriated to cover the expenses that fees would not meet. Under the direction of the capable Prof. Frank M. McMurry, the first session was considered a success. Nearly two score were enrolled, nine or ten instructors were employed at one-tenth their annual salaries, and enough experience was gained to show that the best policy was to offer studies appealing to teachers. It was felt that attendance would have been much larger had the school been better advertised.

This brief period was notable for the increased interest taken in the demands of the women. At the outset the Trustees were petitioned by the students for the appointment of some woman as professor, and in 1892 over 250 Peoria County women asked for the reëstablishment of the domestic science courses. The same year the alumnæ asked that more instruction in the social sciences be afforded young women, that the courses in music and art be extended and placed on a better

basis, that plans be made for giving the girls better physical facilities, and that there be more oversight of their general life; while shortly after they also petitioned that a representative woman be made professor, and suggested that a cottage to accommodate not over fifty be added to the buildings requested of the Legislature. Thus assailed, the faculty manifested a greater concern in the matter. One demand was partially met when Miss Katharine Merrill was made assistant professor of English. A beginning was made in answering another when Miss Merrill presented the Trustees, early in 1893, with the syllabus of a four years' domestic science course, founded on the basis of similar courses in the East and at the University of Chicago. Most of the subjects were already included in the University curriculum; the chief innovations consisted in scientific work in nutrition, which would have required special laboratories and teachers.

For the physical and social comfort of the women Burrill had a practical regard, but little could be done. He closed his term with an urgent request for a woman's gymnasium. He did not think it feasible to provide a residence hall while other wants were pressing, but he recommended to the Twin Cities that it would be a good business venture for some company to undertake a dining hall and group of cottages. He believed that there were too few women—that they ought to aggregate one-third the whole student body, as at Michigan. But he and others felt the obvious disadvantages under which they labored, and those likewise which were not so obvious, as expressed in Miss Merrill's statement that "so long as conditions of living are so hard here, especially for the young women, and so long as there is no social atmosphere in which the students, as students, belong

. . . neither the young men nor the young women will take the pains they owe themselves, and the social status of our students will continue low."

Of the two buildings in which Burrill was interested, the Natural History Building was completed in the fall of 1892, but was not fully furnished till a year later. The Engineering Building was commenced the fall of the former year upon plans drawn by George W. Bullard, an alumnus in the West, and with a Pacific Coast contractor—for the architectural graduates of the University had no sooner learned that the money for it had been granted than they had petitioned that the competition for designs be restricted to them, and this was done. The building was urgently needed, for the number of engineering students had been increasing for some years at the rate of 25 per cent. annually; and the Trustees repeatedly reminded the contractors of their engagement to have it ready the fall of 1894. When Burrill went out of office, he left a list of the new buildings that he and the Trustees agreed were needed and must soon be asked for—a library, museum, auditorium, agricultural and law buildings, and an observatory. Of these the library was considered the most urgent, for that neglected part of the University, cramped in its dark quarters in University Hall, was now the recipient of $5,000 a year, and in the last days of Burrill's term steps were taken towards the appointment of the first full-time librarian.

The acting Regent's general spirit of enterprise was exhibited in a number of ways. Under him the University subscribed for 400 copies of the *Illini,* distributing them as an advertisement, and he asked the students to write on University happenings for their home papers. He suggested that the University buy sites for

faculty homes and offer them for sale at reasonable rates. He had an extraordinarily large exhibit made at the World's Fair—"by far the most extensive and most representative shown by any institution," he reported. The whole was planned and executed by University men, and required nine cars for its transportation. Dr. Burrill and the faculty also allowed the free development of student life in a way before unknown. The discipline was less irritating; fraternities were tacitly encouraged; the art, chemistry, glee, and mandolin clubs appeared, and the last two were allowed to give concerts in neighboring cities. The first Junior Prom was held by the students during this period. Upon petition of the Seniors, the requirement of student orations at commencement was abandoned, and the commencement address was given instead by a guest of honor. Finally, in 1892, Burrill appointed a committee to confer with the local mayors upon the establishment of a union high school, to supplant the preparatory department.

V

THE UNIVERSITY FINDS ITSELF

Draper an Administrator, not a Scholar. Increased Appropriations. Defalcation of Spalding. The College of Law. Growth of the Chicago Departments. Development of Curriculum and Equipment. Administrative Improvements. The Coming of Davenport and the Rise of the Agricultural College. The Engineering Experiment Station. Fuller Student Life. The New State Confidence.

ANDREW SLOAN DRAPER was not the first choice of the Trustees as the new head; the post was offered to Washington Gladden and, informally, to Edmund J. James, both of whom declined. Dr. James took the view that a man of aggressive energy and purely executive talents was needed, and that after he had done his work in bringing the State behind the University the personal opposition inevitably roused in the process would probably make his retirement advisable. Dr. Draper did not accept without some misgivings, though these were connected chiefly with the fact that he was not a University man.

The essential qualifications of the new President—for by this title he had insisted upon being called—were his practical experience in public positions and his administrative grasp. He had had the fullest acquaintance with both educators and legislators; he knew the intricacies of politics, and his personality found apt political expression. When he came to the University he was forty-four years old. The son of a western New York farmer, his first occupation had been as

newsboy in Albany. He began teaching school at eighteen, but later studied law and was admitted to the bar in 1871. Before he was thirty he had established a practice, become well known as a political speaker, and been head of the Order of Good Templars in the State. Following service on the Albany Board of Education, in the State Legislature, and on the Federal Court of Alabama Claims, in 1886 he was chosen by the Legislature as State Superintendent of Public Instruction. Six years later he became superintendent of the Cleveland schools, and was thence called to Illinois.

He was a man of simplicity, directness, of firmness of will and unswerving insistence on his aims, and of broad vision remarkably free from prejudices. The downright quality about him was unmistakable; when he had once taken a position his friends and enemies knew where he stood. He believed in plainness but substantiality: if he bought equipment it was of the best, and if he had some University work that required expert direction he was willing to search the country for the best assistance obtainable. If a building was to be erected, he wished the plans perfected, the materials ready, the ground surveyed, and the money appropriated before earth was turned. Into his political dealings he carried the same traits, and when he had once taken stand on a principle he was not to be moved from it by trickery, chicanery, or compromise. His courage was never doubted. At the same time, there was a sterner element that united with his purposefulness in making enemies, for he seldom forgave an injury, seldom lost a dislike, and seldom had any sympathy for weakness in others. He never forgot in his administration that he had one prime deficiency—his lack of higher education. With but three years at the



President Andrew Sloan Draper

Boys' Academy in Albany and the Albany Law School to supplement his early education, he could never become a scholar. He was not versed in languages; he did not know literature and had little taste for it for its own sake. He read little poetry; he was capable of blundering in talking about the classics, and was said never to have read but one novel—"David Harum." He had explored with thoroughness very few fields of knowledge. Though accustomed for many years to select and guide teachers, he had little sympathy with pure pedagogy, and was not qualified in himself to plan in detail full courses of study. But he was a man of culture in a very real sense, for he knew law, he was a great reader of history, and he had a rare intellectual curiosity and a knack of securing from others knowledge that he had not found for himself. He was an excellent public speaker, fluent and correct, and a plain but cogent and forceful writer. Above all, his consciousness of his defects made him deferential to the real scholar when such deference was to the best interests of the University; for Dr. Draper was never accused of educational narrowness. For the major questions of policy that he had to treat, a detailed scholarly equipment was as nothing beside the unusual qualifications he possessed. And no readers of his volumes of "Addresses and Papers" and "Holiday Papers" can doubt that he possessed very uncommon intellectual as well as executive force.

The grasp he at once manifested of the problems before him greatly pleased the Trustees. "To enable the University to advance to a leading position," he said in his letter of acceptance, "it must have financial aid to an extent which would have surprised the last generation, for the field of University operations has

broadened as the activities of the people have multiplied and become more intense; it must have adequate accommodations and liberal equipment; its departments must be able to supply life-giving instruction to all branches of liberal learning; its work must attract attention, it must be authoritative and command respect, it must show anxiety and ability to stimulate the common life of the people, and bring renown to the good name of the State." More specifically, he expressed his conviction that the University must ask for much larger appropriations, must raise its entrance requirements, must do more work in research, and must improve the social conditions in the Twin Cities as they affected the University. The committee that had searched three years for a President felt that driving power was needed behind just these beliefs. The interregnum had shown the progressiveness of the faculty; the State administration was favorable to the institution; and signs the country over pointed to a great development of education, and especially of the State Universities. It was a critical moment, and one in which the earnestness, energy, and acumen of the new President meant everything.

In his first speech to the students Dr. Draper showed himself capable of winning their regard and enlisting their interest in his progressive plans. The University, he said, was still in its youth, and it would take patience and hard work to make it great, but the time required could be materially shortened by hearty cooperation. He remarked that one difficulty was that those connected with Illinois had taken too little pride in it: the students should write of it as often as they could to friends, to their home papers, and to public men of the State. He would expect them to lift their

hats when they met him on the street, while, for his part, he hoped to become personally acquainted with them all—a promise he made good. "I shall always feel it to be my duty to be interested in whatever you are interested in, whether it be a baseball, a football, or any other match, and hope often to be on the grounds, and cheer our team if we win, and come home in sorrow if we lose." With the fraternities the President shortly put himself on a friendly footing. He was keenly interested in all the group activities of the students, and constantly preached university spirit to them. He helped see to the adoption of the University colors, encouraged the movement for athletic coaching, and preserved discipline in a manly way. The grounds were beautified at his express wish, and he had the President's house built rather with the idea of making it a center for students and faculty than of adding to his own comfort.

It was a large factor in the success of Dr. Draper's first years that John P. Altgeld was in the Governor's chair when he took his seat. Altgeld was the first State executive to realize that the interests of the people were bound up with making the University powerful and comprehensive—as he expressed it in one executive message, "a complete university in the highest meaning of the term." On the first day of the President's service, he came to Urbana to see him. "He talked of the things he wanted done," said Dr. Draper; "they were good things to do and showed that his sympathies were genuine and that he had given not a little thought to an involved and rather depressed situation. He wanted more buildings, more teachers, more students, more carrying of liberal learning to all the people and all the interests of the State, and much more money to do

things with. It was a little surprising to hear a live Governor talk like that.'' He reassured Draper, who was a conservative Republican, that there was nothing in his radical political views to alarm the University. Altgeld, indeed, was not the anarchist he was reputed to be—he was never more than a progressive with an intense belief in democracy and the rights of the poor. It is true that he felt for the unfortunate too blindly, that he hated his opponents unreasonably, and that he read too much German Socialism, but this never affected the work he did for the University. He was the first Governor to attend as many Trustees' meetings as possible, and to visit the University frequently; and he and Draper were soon fast friends.

Upon one fact he and the President were emphatically agreed—the deplorable one-sidedness of the University's development. The agricultural college was improving, the engineering college one of the first in the West and of the three largest in the country, the college of science favorably known for its research; but the University was so ill-equipped for the teaching of literature, history, the languages, business, economics, and law that no far-sighted student would attend it to pursue these branches. Altgeld sympathized with those of limited means as much as he disliked the rich, and he reasoned that endowed universities were likely to be open exclusively to the well-to-do. He wished all the poor youth of the State to have the same educational opportunities as children of the wealthy, and believed that only a well-supported, well-rounded State institution could guarantee this. Nor did he wish to strengthen the liberal studies alone, but he thought that no matter what advanced or professional training an Illinoisan might desire, he ought not to feel it necessary to leave the

State-supported schools; and he lent his whole support to the policy of expansion which was to found the law school, the medical school, the schools of pharmacy and dentistry, and to strengthen the graduate school. He was undoubtedly helped in this by two factors: the feeling in Springfield that it would be well if the Democrats could claim to have been the first to put the State University upon its feet, and the slight nettling of legislative pride by the huge growth of the University of Chicago under the Rockefeller and other millions.

There was the further consideration that other States were rapidly leaving Illinois far to the rear. The University of Ohio had an income in 1894 of $185,000, with a guarantee of a tax of one-twentieth mill. Michigan realized $400,000 annually from a tax of one-sixth mill, and Wisconsin had two taxes of fractions of mills, paying $260,000 annually, with liberal building appropriations besides; the first had 2,800 students and the second 1,500. Minnesota had a tax of three-twentieths of a mill, and had just been given $200,000 for buildings. To Missouri had been appropriated $1,500,000 since 1891, and California had just received $400,000 for its engineering college alone. The reproach to Illinois, wealthier and more populous than any of the States thus represented, was patent, and was emphasized by the fact that while the State was receiving 550 students yearly from its neighbors, it was sending 1,150 outside for college training. In nearly all the commonwealths there was just then beginning a marked tendency towards higher expenditure, and the time had come for the University to ask its share.

Altgeld soon had an opportunity to redeem his promises to Draper. In the spring of 1905 the University asked the Legislature for a total of $502,300, the prin-

cipal items being for a library, a President's house, a heating plant, an observatory, and $180,000 for operating expenses for the biennium. Senator Dunlap guided the bill through the upper chamber without trouble, but the House leaders demanded the striking out of the appropriation for the library. While Dunlap, through friends in the House, had action deferred, President Draper, Prof. Burrill, and Mr. Pillsbury reached Springfield after an all-night journey in a hack and local train, and at seven o'clock telephoned Gov. Altgeld of the danger to the most important feature of the bill. Altgeld promised to bring the Democrats on the appropriations committee into line if the three would split the Republican opposition, and this was done. Committee action had already been taken to place in the House bill certain small items, as for the observatory, which had been omitted in the Senate bill; and when the library was again provided for, the measure the House received for passage actually carried more than had the measure which Dunlap pushed through the upper body. House leaders were as angry as Altgeld and the University were pleased, and the chairman of the appropriations committee telegraphed Draper for permission to substitute for the library an appropriation for the President's House, which had been omitted. It was of course refused (the House was built from the proceeds of some outlying land), and the appropriation as finally made reached $422,000.

The financial affairs of the University were greatly complicated two years later by the defalcation of Treasurer Charles W. Spalding, a Chicagoan of extensive financial interests whom Altgeld had for party reasons seen chosen in Bunn's place. That the University had been exposed to robbery is shown by the report

of a Board committee in 1895 upon the financial system, which, though approving it, suggested a better method of checking accounts, and stated that the safety of the fund had depended less on the plan than on the integrity of the responsible officers. The amendments made still provided imperfectly for the care of the ready money and endowment, and though in March, 1897, the statement of the Treasurer was pronounced correct, three weeks later grave irregularities in his affairs were reported. A special Board meeting was hurriedly called, and a new Treasurer elected—Elbridge G. Keith. It appeared at this meeting that the Treasurer had been intrusted with bonds and cash of the endowment amounting to about $460,000, and with current funds totaling $95,000 more; and that of this $430,000 had been misapplied. For the moment there was some consternation. All the cash balances were involved, all the appropriations had been collected to the end of the year, and the statutes so completely forbade indebtedness that it was impossible to obtain credit to pay salaries. There were other claimants to what property Spalding could transfer to the Trustees, and to enforce the liabilities on the bond he had given was a slow process. John Farson offered to become one of ten men to advance the University $50,000 each, but happily there was a better way out.

The Legislature was then in session, and the University had just asked it for its greatest appropriation, for which it was bringing all possible pressure to bear. The leaders were at once induced to establish a Senate committee to investigate the University's losses, of which Henry M. Dunlap was made chairman. Its report was written by Senator Dunlap with Dr. Draper's assistance, and embodied the recommendations of the latter.

According to the arrangement adopted, the Legislature appropriated enough to cover the yet indeterminate amount of the defalcation, charged the State with liability for the endowment and appropriated the amount of the interest for the biennium, and directed State officers to take charge of legal proceedings. Gov. John Tanner took an interested part in all this. The University, which had already recovered $106,000, was thus guaranteed against all further anxiety. Spalding went to the penitentiary, and four years later the Trustees protested against an attempt to obtain his parole. Nor did the Legislature's action in making good the defalcation affect its liberality in other directions. With other appropriations, $220,000 was granted for operating expenses and $80,000 for a heating plant, though a chemistry building was denied.

After this year appropriations showed a steady increase. In 1899 the Legislature granted nearly $600,000, apart from the interest on the endowment. Of this one-fourth was for an agricultural building, which by this time was imperatively needed. Two years later the supreme need was that caused by the destruction of the old mechanical building by fire, for it had housed wood shops, testing and hydraulics laboratories, and some athletic activities. The University received one-third more than before, or over $900,000, which provided not only for the gymnasium and shops but for a chemistry building, and allowed over $100,000 for the agricultural experiment station. Finally, in 1903 the appropriations passed the million mark by nearly three hundred thousand, of which the most noteworthy item was $150,000 for the use of the college of engineering. Just as Draper had stated that the same sum given for an agricultural plant four years before was a land-

mark in the history of the institution, so he now felt that this ought to lift Dean Ricker's college to a foremost place in the West.[1]

The University's increase in receipts from tuition alone was considerable, for the growth in enrollment during the decade was of a sort to distinguish her among her lustiest neighbors. The attendance had but slightly exceeded 800 in Dr. Draper's first year. Three years later it had leaped above 1,500; in six years it had passed 2,500; and in nine years it had exceeded 3,500. The number of women grew even faster, proportionately, than that of men, for it had risen from less than seven score the first of these years to over 700 the last. As regarded the colleges, this enormous growth was by no means evenly distributed. Agriculture shot up from pigmy proportions to those of a giant, and engineering, expanding more steadily, still grew at a rate which must have seemed unconscionable to science and the arts. The University had leaped out of the small college class forever, but in doing so it had become ungainly and misshapen. A slower, more restrained growth might have been one of greater even-

[1] The exact sum in 1899 was $593,566, together with $50,000 as interest on the endowment. (The State, by the way, was bound by the terms of the Morrill Act to protect the University against any loss of endowment, so that its action in paying the interest was not a piece of spontaneous generosity.) For the agricultural building $150,000 was given, for operating expenses $270,000, for a course in domestic economy $10,000, for libraries $20,000, and for the college of engineering $20,000. In 1901 $350,000 was given for operating expenses, $100,000 for a chemical laboratory, $91,000 for gymnasium, wood shop, and testing laboratory, and $108,000 for the agricultural experiment station. Finally, of the $1,267,125 given in 1903, $500,000 was for operating expenses, $170,000 for the engineering experiment station, $150,000 for engineering equipment, $100,000 for agricultural equipment, $80,000 for a woman's building, and $40,000 for the library.

ness; but the time was as favorable to the technical branches as to mounting registration,[1] for engineers were in steady demand.

To keep pace with this expansion in registration by a similar expansion in facilities was difficult. There was scarcely a year when some building was not being erected; but there was never a semester when some adjustment to relieve congestion was not being made, some new complaint of overcrowding being heard. When Dr. Draper arrived the University was vastly proud of its new Engineering Building, and counted but five other structures in all. When he left there were fifteen buildings, stretching from the new Gymnasium on the north to the Agricultural Building on the south.

The first building to be opened was the Library, and it was the addition of this beautiful structure that did most to add dignity and grace to the campus. Only $150,000 was appropriated for it, but unusual care was taken in its design. Requirements were carefully advertised, and prizes offered for the best plans. Gov. Altgeld was eager to have the University adopt a uniform Tudor-Gothic style of architecture, and through his instrumentality all the prize designs were thrown aside and an agreement made with D. H. Burnham and Co., of Chicago, for the designing and construction of the Library. One German castellated design which this firm submitted was very satisfactory to him, but it would have cost $220,000, and was plainly out of the question; when a second, Grecian in design, was offered, he strongly objected to it, and it also was rejected. The firm threw up its contract after a clash

[1] The total enrollment in 1894-95 was 810, of whom 137 were women; by 1897-98 it was 1,582, of whom 245 were women; in 1900-01 it was 2,505, of whom 465 were women, and in 1903-04 there were 3,594, of whom 718 were women.

in Board meeting, and the architectural faculty was then asked to submit its own plans, Dean Ricker, Prof. White, and Grant Miller offering the Romanesque design which has proved so serviceable and beautiful. Minnesota sandstone, as enduring as any stone except granite, was obtained, the foundations were laid with special care, and the whole was roofed with clay tile. Yet the building was completed within the appropriation, and its success was one of the reasons which induced Altgeld to give up his plan for a uniform style.[1]

The Observatory was simultaneously built; while these were the years in which Dr. Draper was awakening the University to a new interest in its grounds. He repeatedly declared them the most beautiful of the sort in America, and contrasted their finished appearance under the care of Dr. Burrill with the unkempt look of most campuses of the time. But much was still to be done for their improvement, for lawns had been permitted to grow bare, stumps left in the ground, and townspeople allowed on holidays to drive their vehicles over the flower-beds. The last vestiges of the arboretum and the campus fences were removed, cement walks laid, and roadways improved; and in 1895 Burrill Avenue received its name—a pleasant bit of sentiment. A year later the constant services of a night watchman and day policeman were first employed. A little later still the central heating plant, whose smokestack Dr. Draper thought "an attractive feature" rather than

[1] Prof. N. A. Wells decorated the library, and spent much time and effort upon the fresco work in the rotunda, working six months in Paris (1898) upon the studies and cartoons from which these frescoes were executed. Upon this part of his task he spent eighteen months, for which he received about $700 remuneration. The oil paintings are quite worthy the library, and rank with the best of similar frescoes in other American buildings of the sort.

otherwise, simplified the care of buildings, and arc lights came into use on the grounds and incandescent lights in the halls. The President was frank in telling Twin City residents that they should undertake more paving in the University district, and Wright Street and Mathews Avenue were first improved in his time. Buildings were still located with little thought of campus design, however, and with little debate. Gov. Altgeld insisted on the present Library site, against those who urged that of the Woman's Building, while Dr. Draper chose the location of the President's House.[1]

The second great advance in construction came when in the summer of 1899 the design of J. C. Llewellyn, a Chicago architect and an alumnus, was accepted for the Agricultural Building. It was for a hall of brick, consisting of four separate structures around an open court and connected by corridors, the main building three and the others two stories high. Simple and inexpensive, it was yet attractive; it was completed in 1900, and two months later the college would have found it impossible to believe that it had existed in its cramped quarters in the older buildings. A year afterwards came the appropriation for the Chemistry Building, for the old Chemistry Laboratory had been struck by lightning five years before, and so thoroughly gutted that it could only temporarily be patched up for University uses. The Gymnasium, which cost a ludicrously small amount, filled a want as pressing as that of the Library or Agricultural Building. The men had long contented themselves with the upper floor of the mechanical hall, where room for baths, lockers, and general

[1] The only considerable acquisition of land during this period took place in 1903, when four lots on Mathews Avenue were bought for $12,500.

exercise was very restricted, and there was neither track nor space for heavy apparatus. The burning of this had sent them back to the Armory. The women were at this time allotted narrow athletic quarters in the Natural History Building, with ground near by for certain open-air sports.

Finally, the large appropriation for 1903 carried a sufficient sum for the Woman's Building ($80,000), though it was but half of what it should have been. The architectural department had already drawn plans for a more expensive structure, and they had to be abandoned. Six architects of reputation were then selected to prepare sketches and floor plans; and these having been thrown aside, Dr. Draper enlisted the services of McKim, Mead, and White through Representative Joseph G. Cannon. This firm began its work just as Draper left. The hall, in a pure New England colonial style and with a broad frontage of lawn, was for years a jewel, and great was the regret when an addition made it necessary to spoil it utterly—for it had not been planned with an eye to enlargement.

But the most prominent feature of Draper's administration was not the growth in buildings, faculty, funds, or in students, but the strikingly regular founding of wholly new colleges and schools. In the decade no less than six appeared—law, medicine, pharmacy, dentistry, music, and library science. Nor did these represent a mere opportunism; they were the fruit of the principles of Draper and Altgeld that the University must be so well rounded as to respond to every interest in the State. In two or three instances these professional interests themselves urged the addition; in all, the innovations bound the University more closely to the State,

and the State more closely to the University. To establish these schools required of Draper not only tireless energy, but great tact, patience, and wisdom.

The lesser of the new departures, the divisions of music and of library science, were the first to be definitely organized. In the year that Draper began his administration steps concerned with the former were taken, and the next autumn a department of music was opened under Walter Howe Jones, who was paid $700 a year and half the fees in excess of that sum. The department was successful at first chiefly in stimulating general musical interest at the University. Instruction in vocal music was offered without extra charge, and a special scholarship given one senior who had talent enough to train the military band to unprecedented efficiency. Three years after its founding the department had been reorganized as a school, and though still badly housed, had a faculty of nine and offered diplomas in music. The library school, the fourth in the country and the first opened west of the Alleghenies, was founded when in 1897 the nascent State Library School was taken over from Armour Institute, and placed under the charge of the aggressive Miss Katharine L. Sharp, a graduate of the New York State library school. During the summer she succeeded Percy Bicknell as librarian, and she was given two assistants. Admission to the school was on the basis of two years of college work, and the two years' course led to the degree of B. L. S. The library when Dr. Draper came contained but 26,000 volumes, some utterly worthless, and the President labored steadily to build it up, asking in 1897 for $20,000 a year, and continuing to demand large sums. By 1904 there were some 65,000 volumes and 15,000 pamphlets. The special equipment of the library

school was also slowly increased, and in 1902 there was announced the requirement of three years of college work for admission.

The college of medicine and schools of pharmacy and dentistry were destined to constitute a single group in Chicago, and to become closely linked in fortune. Negotiations for the establishment of the medical branch began when in 1894 the College of Physicians and Surgeons proposed that its property and good will be sealed over to the University for not exceeding $160,000, the price to be fixed by a joint committee of appraisal. The Trustees expressed their approval, appointed representatives on this proposed committee, and asked the Legislature for $160,000, or as much of that as necessary, for the purchase. Thenceforth neither party lost sight of the idea of union. Indeed, the college, though very inferior, was one of the three most prominent in Chicago, and well known throughout the West; it was situated in close proximity to the West Side Hospital, with which it was officially connected, and to the Cook County Hospital of 1,000 beds; and its tuition fees were equal to its expenses. Finally, in 1897, an agreement was consummated by which the college was affiliated with the University as its school of medicine, under an arrangement to cover a trial period of four years. The attendance at the college at this time exceeded 400, and Dr. Draper congratulated the University on its acquisition.

So advantageous did the alliance seem to both that in 1900 a more permanent agreement was negotiated—one, indeed, which it was hoped would be final. The value of the college was estimated at $217,000, and this the University agreed to pay to the stockholders from the earnings of the college in the next twenty-five years,

if these proved sufficient, the University taking one-third of these earnings annually. The University was also to pay from the net earnings a lease of $12,000 per year during this period, with taxes and assessments. The principle upon which this agreement was founded was that medical education could not only be conducted so as to be profitable, but so hugely profitable that within a quarter-century enough might be accumulated to pay for an expensive plant. Fatuous and almost shameful as this now sounds, it must be remembered that those were the magnificently disgraceful days when America boasted of a majority of the medical colleges of the world, the larger part of them run for gain and by far the larger part ill-taught and ill-equipped. The last three years, again, had shown the college to be a moderately paying one. The University felt itself protected against mismanagement by provisions which seemed to vest the final authority over the college in the Trustees, though the initiation of policies and appointment of teachers rested with the college faculty.

If any apprehended that this agreement was unwise, they were soon justified. Soon after 1900 attendance fell off in most medical schools of the country, and though it did not at once do so at the college, the increase was not what was expected. Again, a professional agitation for a better standard of medical education almost immediately quickened the public demand for it, and it had to be provided by the University. No sooner had the agreement been signed than it was seen that the college needed expansion, and the West Division High School property was purchased at about $185,000—an addition that meant increased operating expenses. A year later occurred a fire in the original building costing $100,000, while the expense of remodel-

ing the high school was greater than had been anticipated. In all, by 1903 the burden the University had assumed had risen to $528,000; while against this the University's income from the college had been found to be just $4,000 the first and $3,000 the second year! Clearly, the contract could not be fulfilled at this rate, and a Board committee stated its earnest belief that for a variety of reasons the University ought soon to purchase the college outright. Meanwhile, the Trustees instructed the college faculty to reduce the annual running expenses to within $38,400 of the annual income, which would enable the University to pay for the college in the quarter-century.

Doubtless Gov. Altgeld felt that the principles of democracy received as great a practical illustration in the offering of instruction in pharmacy and dentistry by the State as in University expansion in other directions. In 1895 the Chicago College of Pharmacy, which had been established before the University, which had the longest and brightest record of any school in the West, and which had graduated 1,000 students, made an unconditional offer of its property to the University. A slight indebtedness was easily cleared away, and a year later the college became the School of Pharmacy of the University, the Trustees being assisted in its management by an advisory board elected by the Illinois Pharmaceutical Association. The character of the requirements in the two years' course was immediately much stiffened; and the degree of graduate in pharmacy given only to those with four years' practical experience, including the two in the School. Again, in 1898 the Illinois School of Dentistry, of Chicago, with a standard curriculum and equipment and a hundred students, applied to become the University's dental

department. Nothing was done at the time, but three years later the College of Medicine recommended its absorption as a branch of that institution, and this was effected. As the department needed strengthening, an attempt was made to unite with it the Chicago College of Dental Surgery, which was much larger and richer, and a tentative agreement was actually drawn providing for the payment of the stockholders of the latter by installments drawn from the annual earnings. But these negotiations failed, principally through the discovery that the Chicago College was overburdened with debt.

The foundation of the law school was an important bit of expansion, for Altgeld believed that it would greatly increase the serviceableness of the institution, and he, the State Bar Association, and Dr. Burrill had laid plans for it before President Draper's coming. It was brought about in 1897, when $7,000 appropriated by the Trustees for books and salaries became available, and announcement was made of a course in literature and arts preparatory to law. The first teachers were G. E. Gardner and Charles C. Pickett, with three lecturers—Judges O. A. Harker and B. R. Burroughs of the Appellate Court, and Judge Charles G. Neely of the Cook County Circuit Court. Judge Harker was especially active in advising Draper as to the school's administration, and as to means of making it answer the requirements of the State bar; while he organized and regularly presided over the Moot Court. A year after its opening the State Supreme Court made a long-anticipated change in the requirements for the bar, by which no candidate was eligible who had not a high school education and who had not completed three years of legal study. This prompted a rearrangement and

strengthening of the course, and they in turn made possible the school's conversion into a college. It opened under the new title (1899) with James Brown Scott as dean and professor, and with a total faculty of five regular teachers and five lecturers, and a year later no less than twenty-six were graduated from it. At the end of its third year Dean Scott resigned and Judge Harker was appointed in his place.

If we turn from these innovations to the regular colleges, we find the development far from symmetrical. The decade closed with the colleges of engineering and agriculture well to the front, and the advance of the latter was literally amazing. From the weakest division of the University the agricultural departments came to constitute in many ways the strongest. So hopeless had the college seemed during even Burrill's interregnum that one of the conditions on which Draper accepted the presidency was that he should not be held responsible for any want of progress by it. During his first year there were but nine or ten registrants in it, and not a single graduate. When he left, it was the college to which the University pointed most proudly in asking funds.

There were certain circumstances during Draper's first year that pointed to a change. The chief was the resignation that autumn of Morrow, of his own accord, after long service. The Trustees did not appreciate the difficulties against which Morrow had struggled; and yet they did well to accept his resignation, for a man of greater ability in organizing the college department, advertising it among the farmers' sons, and obtaining for it the support of the agricultural societies was needed and was undoubtedly procurable. Gov. Tanner stated that someone was required "who can

chase members of the Legislature over a stake and rider fence,'' by which he meant that agricultural influences must be brought to bear at Springfield. The new head, Draper, after hesitating among several candidates, found in Eugene Davenport, who won his favor by a forcible letter outlining the needs of the college, and whom Burrill recommended. He had taken two degrees at the Michigan Agricultural College; while still a practical farmer he had become director of the agricultural experiment station there; and he had gone to Brazil to found a State agricultural college, only to be thwarted by the government's instability. The University had reason for congratulation that a man so experienced and shrewd had accepted the place. He saw that the State was agriculturally much richer than Michigan, the people progressive, and the college part and parcel of a rapidly growing University. The rural press had recently exchanged its hostility for an encouraging attitude. Though there had been but one professorship of agriculture, and the experiment station had almost monopolized activities at Urbana, he was hopeful that genuine University instruction could be developed beside it and the winter short course.

Even before special appropriations could be obtained, Davenport undertook to extend the college organization and systematize its work. He had insisted on being called professor of animal husbandry, not of agriculture, and he at once organized the instruction under four heads —agronomy, animal husbandry, dairy husbandry, and horticulture. He urged the Trustees to have a suitable agricultural building provided, with full laboratories. The experiment station's investigations into soils and crops were multiplied, each with a character closely related to State interests. Draper had complained that

under Morrow there was "one poor barn where the farm horses and a poor lot of mongrel cattle kept company with unconscionable pigs that made the place a nuisance," and that there were not enough dairy products even for sale to the faculty. Much more attention was now paid to the breeding of fine animals, and in particular a herd of thoroughbred cattle was developed. New barns were erected, better machinery was bought, and a fuller use was made of the farm as an object-lesson to the agricultural students.

Finally, several administrative changes were made, the most important of which was the creation of the office of director of the experiment station, to be filled by the dean ex-officio. By this step much executive authority that had theretofore reposed in the board of direction was transferred to the college, while the station was brought more closely under the power of the Trustees, who appointed its staff. It also made possible a closer connection between the experimental work and the agricultural instruction. The appointment of some notable additions to the faculty came also at this time. Cyril G. Hopkins, then in a small Dakota institution, but a man whose scientific writings had attracted attention, was appointed chemist to the experiment station just before Davenport came, and J. C. Blair came as assistant horticulturist soon after.

But the best achievement of the reorganization was, by a well-calculated and sustained campaign, the wresting of increased appropriations from the Legislature and the enlistment of the support of the farmers. By personal appeals, and to a limited extent by speeches and correspondence, individuals and agricultural organizations were fairly presented with the question of whether they were sufficiently desirous of a strong agri-

cultural organization to fight for it. Three organizations had had representatives on the board of direction of the experiment station, now simply an advisory board—the State Board of Agriculture, the State Horticultural Society, and the State Dairymen's Association; and some of their members were at once ready to assist. The State Farmers' Institute was organized with the support of the University as one of its prime objects, and it soon commanded strong legislative support. Appeals were later made to other bodies which came into prominence after Davenport became dean, and some of which were founded for the express purpose of cooperating with college or station—the Live Stock Breeders' Association, the Corn Growers' Association, the Grain Dealers' Association, the Beet Sugar Growers' Association, and so on. Alumni prominent in agriculture, and many well-known farmers never before connected with the University lent their support.[1] An increasing pressure began to be felt at Springfield behind the appropriations asked for the college. Four years after Davenport's coming this pressure swept away all opposition to the demand for an agricultural building, though at the time the college had the merest handful of students; two years after this it was sufficient to carry a bill enlarging the scope of the experiment station and granting it $108,000; and two years later still it obtained $122,000 for the college and $170,000 for the station. And quite as important as these gains at Springfield was the fact that in thus fighting for the

[1] Among the names which should be mentioned, representing all sections, are those of C. F. Mills, Amos Moore, J. H. Cooledge, S. Noble King, D. M. Funk, L. H. Kerrick, N. B. Morrison, H. M. Dunlap, H. A. Aldrich, A. P. Grout, Edwin Shurtleff, E. C. Curtis, Senator Laurence Y. Sherman, Frank I. Mann, Frederick L. Hatch, and Ralph Allen.



THE AGRICULTURAL BUILDING

college, which was steadily demonstrating its usefulness during this period, the rural population was having its interest in the whole institution roused as never before.

When in 1899 the $150,000 was given for an agricultural building and equipment Dr. Draper hailed it with enthusiasm. "In all the provision which has been made in many States for agricultural education, the generosity of this munificent sum given at one time is unprecedented." He thought that the University should erect the most comprehensive group of buildings for the purpose in America. Unfortunately, he at once set about to devise new policies and methods of operation for the college exclusively in pursuance of his own ideas. The President had no knowledge of Western agriculture, and was acquainted only with the Eastern conception of farming as a business for making a living, not for making money. He had regarded many of the ambitions of the dean and his fellows as decidedly visionary, and now he had a very natural apprehension that without caution the faculty might take its new facilities and make a stupendous failure. He did not believe that such a college as has since been developed was possible. There were no precedents to encourage such a belief; the registration was still merely nominal, and no neighboring university had blazed the way. Intent that no false move should be made, he submitted to the Trustees in April a new plan on which he had consulted but few, and which provided for many backward steps. Its main feature was for the provision of an agricultural high school. This, admitting grammar school students, should teach the ordinary high school subjects, and in addition courses in elementary agriculture. The faculty should be teachers both of agriculture and of the secondary subjects of general cultural

value. At the same time, the college of agriculture as it already existed should be expanded and strengthened, but scientific courses bearing on farming should be kept in the college of science.

This plan was at once repudiated by the agricultural faculty and by Dr. Burrill, who was a constant advisor of the college. A committee of the Trustees also disapproved it, and as President Draper soon after left for a visit to Europe nothing more was heard of it. Meanwhile, Burrill, Davenport, three members of his faculty, and several Trustees were made a committee to visit the agricultural departments of other States and to report on their plant and work.

This body duly visited Wisconsin, Cornell, the Michigan Agricultural College, and the University of Ohio. The results are hardly visible in the report of the committee in June, which contained little; but they are undoubtedly embodied in the very important report which Dean Davenport offered the next month upon the revision of the agricultural courses. Upon this document the whole faculty had labored since the appropriation was first made, and had received invaluable advice from Dr. Burrill. Dr. Burrill presented it in Draper's absence, and he realized that the acceptance of its enlargement of the course of study would revolutionize the college. It provided that in place of less than a score of courses in all, eleven each should be offered in agronomy, animal husbandry, and dairy husbandry, six in veterinary science, and eighteen in horticulture. "It will be noticed," said Dr. Burrill, "that the elective offerings are very large, much exceeding in number those heretofore published by the University, and largely exceeding, it is believed, those offered by any other college or university in America. Of course this list could not be

offered except with the understanding that the number of instructors employed should be as you have already arranged. With these instructors and with this liberal amount of required and elective instruction, the college must take very high rank.'' The report was accepted, and the college thus placed not merely on its feet, but in many ways at the head of all such colleges. The Trustees authorized the organization of the five departments as the dean had recommended, and took steps to advertise the new advantages.

The scope of the expansion that began with the new century may easily be gathered from the catalogues. Thus in 1900-01 there were twelve instructors in agriculture, and the total of courses was forty-three. Two years later there were twenty instructors, and a total of nearly seventy-five courses was given. Two years later still there were announced twenty-four instructors, and the total of courses was about one hundred. The new building had played, of course, an indispensable part in this growth, and had proved quite adequate. The central hall contained offices and classrooms for all five departments, and offices for the State Entomologist and Experiment Station, while one floor of an entire wing was given to household science; one of the small buildings was given to dairy manufactures, one to farm machinery, and one to veterinary science and stock judging. The college and its farms had become for experimental purposes the agricultural center of the State and one of the agricultural centers of the country. The extension work of the faculty had made it known in every county, a growing fraction of the University matriculants entered it, and its investigations were gaining it scientific repute.

The college of engineering had the great advantage

of already possessing its building when Draper came, of having a well-organized faculty, and of having a reputation that attracted a large student body. It was in the flush of its first prosperity when Draper was inaugurated the same week that Engineering Hall was dedicated. As against the nine men in agriculture that year, there were well over three hundred in engineering work, and whereas the Legislature ignored agriculture that spring it gave a small sum for engineering shop practice. The plant increased steadily through the erection of one after another of the small laboratories and shops along Burrill Avenue—first the metal shops, then the electrical laboratory, then the new wood shops, and finally the applied mechanics laboratory. But its development received its greatest impetus when the last appropriation under Draper gave it $150,000. The chief credit for obtaining this sum attaches to Prof. Breckinridge, who had conceived the idea of an engineering experiment station, first as a Federally-supported institution, then, as hope for this faded, as one State-supported. The Trustees and President having decided against including a special new appropriation for the college of engineering in the budget, Breckinridge obtained permission to introduce an independent bill covering it, and from his office carried on an extensive campaign of publicity, urging all the manufacturers of the State to support the measure, and presenting to the Legislature as telling arguments as possible. He himself went to Springfield and lobbied effectively for the grant.

The President emphasized the propriety of spending this so that the college as a whole would feel a powerful impulse rather than that each department would feel well treated. Some distinctive step should be taken,

some decisive movement originated that would lead to large results. He especially proposed the study of such problems in advanced research as promised most for the constructive energy of the world. After consultation with Dean Ricker, he recommended (1) that $30,000 be allotted for departmental equipment for undergraduate instruction, (2) that the equipment of the laboratories be increased, (3) that the metal shops be extended, and (4) most important, that the nucleus of an engineering research laboratory be provided. The effect of these measures was just becoming visible as Draper left. On December 8, 1903, had been established the first experiment station connected with an engineering college in the country, under the direction of the faculty; and it in particular was beginning an important work. The whole appropriation gave the capstone to much steady growth. There was not a single department in which at least a half dozen new branches were not added during the decade. Electrical engineering was practically made over. The course in railway engineering was established in 1898 in response to the demands of several Middle Western lines, three of which promised their coöperation—the Illinois Central furnishing a railway test car, and the Big Four a dynamometer car. Postgraduates were set at special research, and in several of the departments the granting of masters' degrees became common.

Though Draper came to the presidency with a keen sense of the neglect under which the two liberal arts colleges were lying, their development was for various reasons not so striking as that of the technical colleges, and in many ways they were still weak when he left. This is not to say that they did not grow steadily. The college of science profited much by its new Natural

History Building, and by the Chemistry Laboratory; literature and arts by the evacuation of University Hall by other colleges, and the erection of the Library. In both a number of new departments were born, and practically all the old ones greatly strengthened. Dean Kinley presided over the college of literature and arts after 1894, and Dean Forbes continued to head that of science. The name of the former was an innovation, for it had been known under Burrill simply as the college of literature. By 1895 the two schools which had formerly constituted it, that of English and modern languages leading to the degree B. L., and that of ancient languages and literature leading to the degree B. A., had disappeared, and the single degree of B. A. was given instead. About sixty per cent. of the student's course was by this time elective. Within this college Dean Kinley labored with manful energy, and to him is to be given a large part of the credit, not only for the steady development of specific branches of liberal instruction, but for the general enthusiasm with which in the University the cause of literary, classical, and commercial education was henceforth furthered. For the preceding thirty years the main efforts of the faculty had been in advocacy of the new movement for scientific, engineering, and agricultural education; now there was to be a fresh zeal and pride in its labors to develop the other departments. Dean Forbes labored as hard within the college of science, which had now dropped the adjective "natural" from before its name; and both men, as has been said, were conscientiously assisted by Draper.

The first of the two chief innovations in science, the establishment of courses preparatory to medicine, which comprised four years of work in advised outline,

came in 1895. The second lay in a domestic science department which the college shared with that of agriculture, but which found its origin in a work the chemistry department had begun in the analysis of foods and the study of nutrition and household sanitation. Dr. Draper in 1899, after a cautionary remark that "mere expertness in performing or supervising household duties does not seem to be up to the grade of college work," had suggested that the department be instituted in the new Agricultural Building. A competent director was found in Miss Isabel Bevier, who was made professor of household science, with one instructor, and who began work the fall of 1900. Plans were laid at the same time for the supervision of a University lunchroom by the department. Five years later, when it was ready to be moved to the Woman's Building, the two instructors offered nine courses. Students in household science might register in either college, but to those in agriculture special county and Congressional scholarships were open upon the same terms as to men.

The development of the courses in chemistry during this period under Dr. Arthur W. Palmer, an alumnus who returned from foreign study as assistant professor in 1889 and became a professor a year later, was such as to make highly fitting the erection to him of a commemorative tablet following his death in 1904. When he began his professorial service he gave all the lectures of the four years' course (then including mineralogy) and heard all the students' recitations himself; the standing of the department became such that the increase in registration constantly surpassed that in the teaching force, and despite all the additions to the faculty the pressure of instructional work never abated.

He was responsible for the founding in 1897 of the Chemical Water Survey, served as its director, lectured assiduously, carried out research work, bore the chief administrative burden in the department, and planned the present Chemistry Building and supervised its erection. His expert knowledge made him the chief chemical witness in a protracted suit between St. Louis and Chicago following the opening of the Chicago Drainage Canal. The faithful carrying of this heavy burden induced a physical weakness which cut short his career at the very moment when new facilities had given him great new advantages. But with his department organized, housed, and equipped, and the teaching force greatly strengthened, it was left ready to undertake the broad and successful work in instruction and research which it has since carried on.

In the college of literature and arts the most notable development lay in the improvement and arrangement of the work in economics so that it furnished a virtual department of commerce; and in the establishment of a department of education. For some years after Dr. Kinley took charge of a separate department in the study which Gregory had delighted to teach, he found himself much overburdened. He had first offered eight courses, and then eleven, and even after becoming dean he continued single-handed to teach most of them. In the last three years of the century came Dr. N. A. Weston and Dr. M. B. Hammond, and this permitted a considerable expansion. Finally Dean Kinley prevailed upon the Trustees to ask the Legislature for a small appropriation to open a school of commerce, under the title of Courses of Training for Business, and this was announced in 1902, with special library and two new instructors. It was stated that studies could be

combined to afford training for general business, for transportation, banking, journalism, and for insurance, but for some years students found little to tempt them except the "general business." As for education, it was an outgrowth of the old "philosophical group," and developed from a few courses in abstract pedagogy to some ten of practical sort, with special work for teachers included also in other departments. In 1899 a Board committee even recommended the establishment of a teachers' college, but this was impracticable.

The general broadening of the elective curriculum in both colleges was, moreover, great. In 1894 their work could have been duplicated at any sturdy small college; in 1904 it was of genuine university character. When the decade opened, for example, there were six courses in botany, and when it closed, seventeen. To chemistry much attention had always been paid, and in 1894 there were twenty-one courses offered, but ten years later there were over fifty, with nine more for graduates. In English, which was steadily strengthened under Dr. D. K. Dodge, the student of Burrill's last year had to content himself, besides the general survey, with a course on Shakespeare, one in nineteenth century poetry, and one in eighteenth century prose. In 1904, though the offering was scanty still, there were over twenty courses besides the general survey, Chaucer and Browning now being honored with special study, and there being even a course in the history of English criticism. The German department of the interregnum had comprised, besides the first two years' work, a year's course in Gothic and Old High and Middle High German. In 1904 there were well over twenty courses, including one each in recent prose fiction and recent drama, and a seminar in modern German literature. History comprised four

courses at the beginning of the decade and eighteen at the end, permitting now of study in American and British history. In rhetoric were taught the first courses in journalism, advanced composition, and debate; and in mathematics eighteen courses grew to twenty-nine. Thus was improved a very faulty curriculum.

This constant strengthening of the liberal branches was reflected in the progress of the graduate school. The year of Dr. Draper's arrival the school was placed in charge of the Council of Administration and the office of dean established, to be filled by the dean of the general faculty—at that time Prof. Burrill. The attendance steadily mounted, and had reached 75 by the new century and 120 when Draper left. The necessity for rapid development in undergraduate work, the meagerness of equipment, the pressure on the time of the faculty, were all hard obstacles. Yet one by one the departments established graduate courses. In 1904 Draper reported that they were offered in twenty-seven general branches, and while the number in any one department was small, to each they gave a more ambitious aim and higher standard. In economics, for example, there were two graduate courses and two seminars, and in German, zoölogy, animal husbandry, geology, and English three courses each. The number of fellowships granted unfortunately remained almost stationary, but a respectable number of higher degrees was given—fifteen masters' degrees in 1901, ten in 1902, and in 1903 seventeen, with two doctorates.

The summer school was with difficulty kept alive during the early part of Draper's administration, and it had none too secure a place at its close.[1] The second

[1] Dean Kinley, Prof. Arnold Tompkins, and Dean Clark successively headed the summer school.

session (1895) offered a number of studies of special appeal to teachers, together with ten days' field work in zoölogy, botany, and entomology at the biological station at Havana on the Illinois River. The teaching of languages was lamentably weak, and private classes were organized in Latin and Greek, and French and German. Mainly because of a smallpox scare, only twenty-six students were enrolled, and of these the station on the river had a very large proportion. While the Trustees therefore authorized Prof. Forbes to broaden his work according to a plan he had submitted for united effort by himself, Prof. Tompkins, and Vice President Burrill for developing high-grade work in field science, they seriously debated the dropping of the regular Urbana session. However, a little correspondence showed a majority of the county school superintendents of the State in favor of it, and that eighty out of a hundred city school superintendents believed that persons from their locality might be induced to attend, so that it was continued. It was decided to make the course one for eight weeks, and to open it to any teacher holding a first-grade county certificate. The attendance after this disastrous year rose steadily. In 1899, 148 students were enrolled; in 1901, 204; in 1903, 229; and in 1904, 238. This was largely the result of better advertisement, of the broadening of the curriculum, and of the appropriation of more money—$5,000 in 1903 and $7,000 in 1904—with the consequent elevation of salaries, professors receiving $300, and the retention of good men for the session.

The administrative changes required during this period of rapid expansion were many, and Draper's talent was eminently administrative. He was constantly

reshaping the polity of the University, his innovations in many instances being suggested by other institutions, but in some showing originality and penetration. Within two years he had given clearer definition to his own powers, upon which he was insistent; for the general supervision of the instructional work, he had created the deanship of the general faculty; and he had organized the Council of Administration. This Council, he explained, "does not legislate, it acts with the President in administering. The arrangement is flexible and has proved an admirable one. It secures the dispatch of all ordinary executive business without delay, while it secures the action . . . of the most experienced men connected with the University . . . upon all matters of any unusual consequence." To the general faculty, consisting of all of professorial rank, was given charge of the instructional policy. Later the deanship of this body was dropped, and the growth of the University led in 1901 to the creation of the Senate, composed of President, deans, and departmental heads, which took over the duties of the general faculty. The University statutes were revised, and the functions of the various faculties, committees, and departmental chiefs given both a due differentiation and a due coördination. The entire faculty organization, with its methods of operation, expression, and control, was steadily overhauled, and its parts more or less insensibly but surely so articulated as to make an efficient working machine.

Other important acts in internal policy were the establishment of the offices of dean of undergraduates and dean of women. The former grew out of Draper's appreciation of the growing impossibility of looking after the student family without the appointment of

a special supervisor. He himself tried to attend as many games and social gatherings as possible, but he could only faintly keep in touch with student life. So, too, discipline required a man acquainted with student psychology, in the mass and in the individual. Thomas Arkle Clark, head of the department of rhetoric, who had just filled the acting deanship of the college of literature and arts, and who was popular with the students, had in the spring of 1901 assisted Draper in two trying cases—one concerning a member of the ball team, one the son of a man of political importance; and that June he was given the first place of the sort in the country. He at once had instituted a system of reports on the scholarship and absences of each student; he began to call upon sick students and to assist the needy to find work; he began to study the then acute problems of hazing, dishonesty, and graft in undergraduate organizations and activities, unwholesome fraternity conditions, excessive drinking and gambling, and rowdyism in the celebration of athletic successes. The force of the office lay not so much in its rules and regulations as in the reserve strength that was built up in innumerable personal interviews and acts of kindly help, while it derived much from Clark's remarkable memory for names, faces, and facts, his unusual insight into the undergraduate mind, his stubborn persistence, and his generous fund of optimism and good humor. The long agitation for better care of the women bore fruit when in 1897 Draper saw to the establishment of a woman's department, the dean of which was to be the advisor, disciplinarian, and protector of all women students. Miss Violet D. Jayne, educated at Michigan, Minnesota, and abroad, who had been in charge of English departments in State normal schools in Wisconsin and Cali-

fornia, was appointed, with duties that for a time included the teaching of some English. Her experience, her broad culture, and her capacity as a leader made her a happy choice, as was shown by the fact that at an early address to a woman's convocation she obtained the ratification of a set of social rules of comprehensive character. The women agreed that they would go to no parties except at week-ends, that they would insist upon chaperones at all, and that they would leave at twelve all except those which the faculty had agreed might last until later. At this convocation was also initiated the movement which resulted in the organization of the Woman's League, a democratic student organization. The Woman's Building and its equipment of social rooms came too late to assist her in her difficult work.

For steps elevating the standards of instruction President Draper was always alert. He sharply limited the University's employment of professors for other than their instructional duties—as that of members of the architectural department on the buildings—which had led to a neglect of classes and a jealousy over the additional compensation. In 1899, at the instance of President and faculty, and after listening to a special argument by Dean Forbes, the Trustees gave up the outworn division of the University year into three terms for one into two semesters. The fees were made $12 per semester. The teaching of preparatory and Freshmen students together in elementary French and German classes was stopped; the requirements for graduation in law were increased; the number of credits given for military and physical training was made better to correspond with the work done—three; and a six years' course in combined science and medicine leading to both

scientific and medical degrees was authorized. The President worked constantly if sometimes untactfully for harmony among the departments, as when in 1898 he reorganized electrical engineering in still fuller independence of the physics department, and stormily dismissed an assistant professor whom he characterized as a trouble maker and an insubordinate. He moved, too, towards some enlargement of the faculty compensation. In 1900 a committee of the Trustees reported that no material advance had been made towards the maximum salaries named in the classification adopted six years previous, which ranged from $2,500 for deans to $1,800 for assistant professors. It was eloquent of the general underpayment of the profession, however, that pay at Illinois was found as good, on the whole, as at other State Universities, Wisconsin alone making an appreciably better showing. The Trustees resolved that the salary of the deans be made $3,000 as soon as possible and that henceforth the salary of no full professor be less than $1,500. In the next two years legislative generosity made feasible the elevation of rewards which this represented. It left salaries still low and very uneven, and much complaint was constantly heard, which President Draper conveyed to the Board. But even he was never converted to the gospel of more than "adequate" payment, and in registering the discontent he was impelled to remark that the scarcity of competent teachers in the technical branches made for inflated compensation.

The questions of leave of absence for study and of the sabbatical year proved rather troublesome. During the interregnum it had been recommended that sabbatical years at half pay be granted professors for study, and in 1897 Burrill, Ricker, and Shattuck were

voted such leave, to be taken consecutively, in reward for twenty-five years of teaching. This, however, was merely part of the sentiment that brought about somewhat later an order for the painting of the portraits of several old servants by N. A. Wells. Neither Illinois nor any other State University had any definite rule regarding leaves of absence with pay until 1900, though several gave such furloughs on varying terms. In that year the Trustees adopted the recommendation of the interregnum, adding a provision that any professor who was given a sabbatical year must pledge himself to remain three years after his return, although the University agreed only to keep him for one. But after several professors had taken leaves it was found that the Board's action had provoked some misunderstanding, for certain men had looked upon the sabbatical year simply as a relief from regular work. In 1901 the Board therefore specified that it was not a furlough in the ordinary sense, but a "leave of absence for the purpose of foreign study"; at the same time the privilege was extended to associate and assistant professors.[1]

The spirit of faculty life in this period witnessed important changes, traceable in part to President Draper's personality, in part to the steady growth of the instruct-

[1] One of Draper's policies was to emphasize the traditions of the University. He had Dr. Gregory brought to deliver a course of lectures early in his term—Gregory then holding the title of professor of political economy emeritus, though his residence was in Washington, where he had been at one time a Civil Service Commissioner. He also obtained the attendance of Prof. Turner at commencement in 1898, though the latter was then 93 years old. The University, Draper thought, "might well do itself the honor of initiating proceedings looking to the erection of some fitting memorial to this heroic old man, whose patriotic and unyielding purpose brought it into existence." When Gregory died in 1898, faculty and Trustees adopted resolutions of regret, and in accordance with his wish he was buried on the campus. When Turner died in 1899 similar resolutions were adopted.

ing staff. The rather elaborate general receptions at the President's house, and his practice of inviting groups of the faculty, largely in the order of their executive rank, to formal dinners, had a strong influence in unifying and at the same time socially classifying the body, and in giving a more formal character to its functions. The evening suit for men first became customary at small dinner parties, and urban usages of etiquette were insisted upon. The complexity of the growing University community was reflected in the birth of a number of organizations to bring members together more frequently and intimately, and thus to diversify the social life. The most important of these was the Faculty Social Club, open to all of both sexes in the University faculty, which held monthly assemblies for dancing, card playing, and a small supper. Its membership gradually became too large for the rooms available to it, and it was found impossible to reconcile the tastes of those who wished to dance and those who objected to doing so. In direct succession to it came two clubs, one, the University Club, for men only; the other, the University Women's Social Club, enrolling faculty women and the wives of faculty men. The history of both dates from the years following upon Dr. James's coming, and both still continue in active operation. The former was organized for the purpose of owning and maintaining a clubhouse, and the latter from the first held monthly an informal reception in the parlors of the Woman's Building, with light refreshments, proving especially useful in making newcomers agreeably acquainted. During Dr. Peabody's administration some smaller clubs had been formed, notably a social science club; these were followed under Dr. Draper by the "theory club," which met at intervals for the discussion

of works of theoretical character, the "philosophy club," and others.

Between President Draper and the Trustees relations were not always unclouded, though this was largely the fault of the administrative system. There had never been a clean-cut distinction between legislative action by the Trustees and executive action by the President. One period of friction came to a head in 1898, when Draper was provoked to write lucid definitions of the functions of the two, and to have them introduced by Trustee Alexander McLean, always an active friend of the institution. The function of the Board, it was declared, was to obtain the needed revenues of the University, and to determine the ways in which the funds should be applied; it was to map out University policy, but to leave the execution of that policy to its executive agents, who, "within the general lines of policy laid down by the Board, . . . should not be interfered with." Rather superfluously, it was added that "it is no function of a Trustee to act as superintendent of the University business, and it would be most reprehensible in a Trustee to have secret meetings or understandings with members of the faculty, other employés, or students." The President, as chief executive, was to have constant watch and care over every University interest, and particularly the fullest responsibility in the instructional work; he was to recommend new faculty members, in an exigency to appoint them, and to hold their teaching to just standards; and the Trustees were to recognize that it was neither possible nor desirable for them to direct the details of executive action. The passage of these resolutions was accompanied by an expression of warm appreciation for Draper's labors.

One specific point of disagreement was upon the re-

mission of fees. In response to a movement among the farmers and others, the Trustees in 1901 asked the Legislature for money to enable them to surrender all tuition charges to Illinoisans. Draper thought this action ill-considered, and in 1903, when the question was revived, uttered a spirited protest. He pointed out that the University could not be attended by all, and that it was therefore not on a footing with the common schools. He had sounded the sentiment of the students, and had been assured that they would rather continue paying the fees if thereby an increase might be made in the University's equipment. While for needy students able to qualify there was an abundance of free scholarships, for the general undergraduate body the character of the students' work was improved by the consciousness that they paid something for their instruction. Finally, he felt that the small colleges of the State would suffer under the competition if tuition were remitted; while he showed that practically all other State Universities collected tuition. The issue was therefore dropped, though not before it had made a considerable undergraduate stir and caused the comptroller much trouble. But Draper's determined insistence upon his full authority served after 1898 to make the Board avoid rather than seek mooted questions.

Of the promising advances made in the fields of engineering and agricultural extension activity during this period, those in the latter were easily the most important. After the preliminary changes in management which immediately followed Dean Davenport's arrival, a general readjustment was effected by the law of 1901—"bill 315"—one even more important than the previous measure providing the Agricultural Building.

Nothing had ever before been appropriated for the station, yet this carried $108,000 for the biennium—the first large State grant for the purpose in America—and opened a period in which appropriations were by 1909-10 to reach $276,000 for the biennium. At the same time $16,000—by 1907-08 to reach $142,000—was appropriated for the biennium for the specific use of the college; for a striking feature of the act, and one much to Draper's disgust, was that the funds given station and college were set wholly apart from those given the rest of the University. Each of the definite farming interests which Davenport had enlisted in his fight for State support was given some share in the appointment of advisory committees to confer with the station on the experiments which the act prescribed. Thus the Live Stock Breeders' Association was to appoint a committee to offer advice upon experiments affecting the feeding and marketing of cattle; the Corn Growers' Association, Corn Breeders' Association, and Grain Dealers' Association were to assist the station in devising experiments upon the best methods of producing corn; the State Farmers' Institute was to appoint a conference committee upon the analysis of the soils of the State and their maintenance; the State Horticultural Society upon experiments for the improvement of orchard treatment; the Illinois Dairymen's Association upon the investigation and improvement of dairy conditions; and the Illinois Beet Sugar Growers' Association upon the investigation of the best methods of beet sugar culture. The Trustees, of course, were not limited in their broad control of the whole system. As a result of this law, popular interest in the station at once increased greatly, and the edition of its bulletins rose within two years to 32,000 copies of each.

The work of the engineering experiment station had before 1903 been somewhat anticipated by the study within the civil engineering department of railway roadbed construction, and right-of-way maintenance, and of the use of mortar and cements, and within the mechanical engineering department by that of railway operation. The station first made provision for a steam laboratory and its equipment, for giving the laboratory of applied mechanics appliances for advanced work, and for developing a road laboratory for testing road and pavings materials. Investigations were also commenced at the end of the administration into the value of different fuels. Other extension activities which deserve mention were those of a vaccine laboratory founded for the benefit of physicians soon after Draper came, a chemical laboratory to examine the State's potable waters, and a laboratory of economic geology which studied clays, lime and cement materials, and building stone. An effort was on foot during this period, with Dean Forbes its moving spirit, to establish a State Geological Survey; and in 1901 a conference of colleges was held in Chicago to promote the movement, and the Legislature was asked to divide the Survey's work among the different institutions, with headquarters at Illinois. But it was some years before the Survey became a fact. Of extension work in the narrowed sense there was little, for no effort was made to revive the attempt at lecture courses. Near the end of the administration the Trustees appointed a committee to consider the possibility of offering correspondence work in agriculture, but it arrived at no material result;[1]

[1] The committee that considered the question of correspondence teaching reported that the University seemed to be reaching all but three classes of farmers—young farmers unable to attend college, farmers' children who wrote to a University office that

the special representatives of the University at the Farmers' Institutes were the most the University could show.

For the encouragement of attendance during the decade every means—the accrediting of schools, the issuance of circulars, the use of indirect advertising—was employed. The entrance requirements were steadily elevated, but only to spur on the high schools to better work, and to keep abreast of general college standards in the Middle West. In 1899 a special high school visitor, Stratton D. Brooks, was appointed, and within two years Draper reported that the schools were fast improving, especially in the northern and central parts of the State, so that the students of 160 were admitted without examination.[1] Three years before his administration closed, Draper saw to the thorough reorganization of the preparatory department, now called the academy. The principal and instructors were all informed by the Trustees that they would no longer be wanted unless reëngaged, the inefficient were weeded out, and a number of net additions of value were made to the staff, clearing the way for a high school course of comparatively full scope. But throughout these years the feeling was growing that the academy had no rightful place at Illinois.

It was under Draper that the boast of Peabody that

spent much time in correspondence with boys and girls but who could not later attend college, and teachers of rural schools.

[1] Beginning the fall of 1899 the entrance requirements were made 36 credits, the term credit meaning the work of 60 normal recitation periods; of these, 28 were in prescribed work, while there were varying restrictions on the other eight. All students had to offer nine credits in English and six in mathematics. Beginning in 1903, various new entrance requirements to the different colleges were prescribed, the net demands being stiffened and rationalized. By 1904 there were about 250 accredited high schools.

the University had become the State University was first fully realized. In the ten years it passed from a shrinking pretender to State favor to an institution whose power was recognized from Chicago to Cairo. Significant of the scant esteem in which many still held it in 1894 was the remark of the Chicago *Herald,* apropos of the choice of the new head, that "there is no such thing as the University of Illinois," and that the Trustees' duties consisted in "looking over the records of a bucolic school in the interior, and awarding diplomas of husbandry to graduates thereof at stated intervals." Protests from various sources were immediately heard, to be sure, and they prompted the *Herald* to send a correspondent to the University and to recant in a special article. But Gov. Altgeld still found it proper in his message of 1895 to write: "For many years there has been maintained . . . a university now known as the University of Illinois. For some reason our people do not seem to know much about it. By many it has been regarded as an agricultural school." Both Draper and the Trustees appealed to the students to speak of the institution to legislators and editors. The addition of the new professional departments interested the professional classes, while Altgeld wisely gave as one reason for his approval of the Chicago departments the fact that they would enlist the support of Chicago business interests. Above all, Dean Davenport's skill in winning the farmers' organizations to his side counted heavily in favor of the whole University; while his methods were to some extent imitated by other departments—Draper admitted that the final large appropriation for engineering was partly due "to the very cordial coöperation of the organizations and the business men engaged in the building and the construc-

tive business of the State." Finally, of course, the sheer momentum of increasing registration had its due effect.

The beginnings of the administration saw student life emerging from its small college atmosphere; by the end the large enrollment had made it approximately what it is today, with the many peculiar features derived from the association of thousands of students in a very small community, over a hundred miles from any large city, in an environment where nature contributes little to undergraduate amusement. Draper and the faculty, members of which he constantly asked to assist him in student guidance, did much to cast this life in the right mold, and relations between students and teachers were much healthier than before, simply because they were larger and freer. At the outset of his administration the President obtained, in convocation, the choice of orange and blue as University colors in place of the old black and gold, and there was something symbolic in this adoption of the more vivid, decisive hues.

As a disciplinarian Draper excelled. On first coming he told the students that they felt too much loyalty to the classes, too little to the institution; and he warned them with some effect against the hazing and the riotous celebrations that hurt the struggle for appropriations. When early in 1897 there occurred a Freshman-Sophomore clash of serious consequences, he enforced the University regulations in a memorable way. The sophomores set upon the freshmen one January night as the latter were attending a class supper at an Urbana hall, and a young woman was temporarily blinded by a foul-smelling chemical thrown among the guests; two students were arrested, and after an uproar the others were dispersed by the fire department. The Council

began an investigation which lasted almost uninterruptedly for ten days, and which had scant charity for student bystanders who thought it dishonorable to testify. Draper proclaimed at a special convocation that undergraduates who refused to aid the authorities with information which they possessed were subject to discipline as severe as the original offenders. The President also wrote the State's Attorney reminding him that he could force the attendance of student witnesses and examine them under oath, and he made it clear that he would support the officers of justice in every way. The students reluctantly agreed that he was right, a number of onlookers testified, and nine students were expelled and one was suspended—all later confessing. The lesson made a deep impression, and no disturbance of such magnitude again occurred, though one or two smaller affairs were exploited by the more sensational Chicago papers, which once even fabricated a story about the burning of Gov. Tanner in effigy on the University grounds.

The most prominent development of the period was in athletics: a development comprehending a great broadening of intercollegiate relations, the rise of the coaching system, and the formulation of a code of athletic ethics. After 1894 the University played few games with the small colleges, and matched itself chiefly with members of the present Conference and with Michigan. Considering that football was first played in 1890, it made its way to parity with baseball with great rapidity; in 1891 a fair team played a series of six trans-Mississippi games which carried it as far west as the University of Nebraska. Like all Western institutions, the University complained that few high school graduates had ever so much as seen the sport, and

George Huff, who in 1895 returned from Dartmouth as both football and baseball coach, had a hard task. In 1894 Illinois defeated Chicago, but lost to Purdue, and the record was thereafter mixed, Chicago especially being a fairly consistent victor. In baseball the team was uniformly successful, and in track sports it did better and better, though Harry Gill, a noted Canadian athlete, did not come as coach till 1904. The year 1902 was signalized by an Eastern trip on the part of the nine, in which Princeton, West Point, Yale, and Pennsylvania were successively beaten, though Illinois lost to Harvard. A year later "Jake" Stahl made the home run in the Illinois-Michigan game which its decisive nature and a happy photograph rendered so memorable.

The conditions under which the early games were played were far from satisfactory to the students, and most repugnant to the faculty. There were no codes of rules, and no organizations to enforce any. The purpose of coaches in Lackey's day was to win games at any cost, and they would themselves sometimes displace players who displeased them—Alonzo Stagg entered the first Chicago-Illinois contest. One early regulation stated that no team might include more than two professionals. It is true that at Illinois and elsewhere all possible emphasis rapidly came to be laid on the desirability of making the team members genuine representatives of the undergraduate body, and that even when there was yet no definition of an amateur, a list of the contestants by classes, certified to by the president, was insisted upon. But repeatedly games were broken off because of some savage quarrel as to team personnel or playing methods, and the athletic departments of half the universities were so frequently on bad terms with each other that the bitterness is still retained in some

college songs. It was a crying misfortune that the Eastern coaches had not brought Eastern standards and rules with them.

Finally, early in 1895 the presidents of Illinois, Northwestern, Wisconsin, Purdue, Minnesota, Lake Forest, and Chicago felt forced to meet in convention and draw up the rules which are the basis of the existing Conference. The passage of a resolution that all Western teams should put an end to professionalism was followed by the adoption of eleven specific regulations. The chief requirement was that each player should be a student carrying full work under certificate by the registrar. It was provided that a man leaving one college might not play upon the team of a second for six months—an important rule, for the universities had been bribing men in small colleges to change their registration. No man delinquent in his studies could play, none was to be given pay for playing, and college teams might not play professional teams or athletic clubs in regular games, as Illinois then did. Finally, each college was to create a faculty committee on athletics. These rules were not to be binding till the various university faculties had ratified them, but in most cases this ratification soon followed. A year later, again, delegates from seven universities—Michigan displacing Lake Forest—met at Chicago, most of the delegates being coaches or athletic directors. H. H. Everett represented Illinois. A harmonious session was followed by the adoption of rules which represented a marked advance over those of the previous year. It was provided that no student who had ever used his athletic skill for gain was eligible for a team, and no instructor. The chairman of any athletic committee might challenge a player, who must thereupon be made the subject of a report by his own

athletic committee—this report to be conclusive. Each player must sign a statement as to his eligibility. All athletic association accounts must be audited by a committee on which the faculty was represented, and the legitimate expenses of team members were enumerated, the difference between ordinary board and the training table being admitted as one.

Not all the universities lived up to this set of rules, though Minnesota, Purdue, and Illinois most honorably did. Three universities for a time refused to accept the six months' rule, and Chicago also refused to bar team members who had formerly accepted money for playing, but who were in college sports when the rule was passed. Wisconsin's students and faculty were in the main supporters of the rules, but the football managers obtained the defeat of some of them through the regents. Some Illinois students thought at this time, probably unjustly, that various rivals were out to win by hook or crook. At Chicago one man, remarked the indignant *Illini*, "has been in athletics there since the institution opened. He will probably be there when Macaulay's New Zealander stands on the wreck of London Bridge and views the ruins of modern civilization. It is an open secret that Nichols has for several years played games for money." Such accusations were bandied rather too loosely in the Conference, and there was a resultant ill-feeling of covert sort among many members, especially when, as often happened, one team defeated another through challenged men. Thus after Chicago's victory over Illinois in 1896 Nichols was more execrated than ever.

The activities of clubs and societies naturally multiplied during a period of such expanding registration. Next to the Athletic Association, the Christian Associa-

tions were most prominent, for the faculty heartily encouraged them as evidences that Illinois was not irreligious. After collecting a large part of its pledged building fund, the growth of the University inspired the Y. M. C. A. to plan a larger building, and it rested content with temporary quarters while it raised more money. Both it and the Y. W. C. A. had many more functions after the abolition of chapel in the fall of 1894. Chapel had become stiff and formal, it was no longer well attended—for no roll was called—and it interfered more and more with the numerous early classes. For a time a semi-regular assembly was substituted, when all regular exercises were suspended, and the faculty and students called to hear a religious program and an address; but this, too, soon disappeared. The Associations coöperated with the several churches, and it was through their efforts that by 1900 Illinois had more students actively interested in religious work than any other institution in the State.

Forensic interests were still at a lower ebb than before, although the University, after its withdrawal from the State Oratorical Association, began debating with Chicago and with other State universities. An English Club, formed of faculty and advanced students under the leadership of Prof. Dodge to study contemporary writers, established itself flourishingly. The greatest innovation was the sudden birth of dramatic activity. The new Cercle Français produced "La Cigale Chez les Fourmis" in 1895, and followed it with "La Poudre aux Yeux," "Le Bourgeois Gentilhomme," and "Le Medecin Malgre Lui." The new Deutscher Verein proved a sturdy rival with "Minna von Barnhelm," produced ambitiously, "Guenstige Vorzeichen," and "Einer Muss Heiraten." The students' Dramatic Club gave

"The Rivals," "The School for Scandal," "Miss Hobbs," and other plays, the English Club gave "Twelfth Night," there was an Opera Club that gave six of the Gilbert and Sullivan operas in succession, a Choral Society that presented "Hiawatha's Wedding Feast" one year and a Christmas Concert another, and an organization with guarantors which supported an annual musical festival in May. Dancing became an amusement of much greater appeal at this time, for while the class dances (long quasi-secret affairs) had been known before Draper came, they were now much more imposing events, and Cotillion, Prom, and Senior and Military Balls were all held with pomp and circumstance in the Armory. Capt. D. H. Brush arranged the first cadet hops in 1896 as a means of breaking the social ice for the Freshmen; and two years later a students' dancing club came into being and held informal dances at stated intervals.

A great shaking-up of student publications came midway in Draper's administration (1899), when he, expressing general sentiment, called for a radical change in the management of several of the periodicals. The old-style literary *Illini,* he thought, was outworn; in appearing only weekly it could carry no real news, its literary features were poor, and the University's support destroyed its independence of tone. He recommended a semi-weekly or tri-weekly newspaper, to be managed by the students alone, and—by implication—a separate college magazine. He also proposed that a series of University bulletins be instituted under the direction of the Council to embody the results of careful research work, and that the *Agriculturist* and the *Technograph* be merged with it. In partial pursuance of these ideas the *Illini* appeared that autumn as a tri-

weekly newspaper, dingily printed but alive and clever —an adequate organ of the University intelligence. A year later the *Varsity Fortnightly* (subsequently the *Illinois*) took its place as the college magazine, though it led a precarious existence. Under its later title it was managed by the English Club and filled with English Club papers. The *Technograph* and the *Agriculturist* continued to appear in their old form, and continued to improve. The President's idea of the special series of University bulletins bore fruit in the now important University Studies.

The four fraternities that existed at the end of the interregnum grew in the decade to thirteen, while there appeared no less than five sororities. All these organizations acquired homes, which, though still only frame structures, helped greatly in solving the housing problem, especially for the girls. These were years of great fraternity influence, for the faculty smiled on the organizations. Four honorary fraternities were also formed during the decade, and each did something to elevate standards of scholarship. In short, the student who was at the University in 1904 saw nearly all the phases of student life, though in elementary form, that are seen by the student today. The chief distinction lay in the existence of a little more of roughness, a little less of social and intellectual refinement. Hazing, for example, was rising to an extreme height, and the sousing of freshmen in the Boneyard at night and the cutting of their hair usually ended only after the color rush in mid-October. The manners of the students, in the fraternities and on the campus, were to change for the better. But all the spontaneity of present-day life was there, from the time when the free silver issue called forth the University's own "Boy Orator of the Bone-

yard'' and Spain was burnt in effigy to that when the undergraduates expressed in mass meeting their unanimous indignation that they could not wholly manage athletics for themselves.

The resignation of Draper was not unexpected, and for it a variety of causes may be assigned. The reason which he gave chief prominence was that he could not resist the call of duty in his native State, which had offered him the newly created post of Commissioner of Education in a way constituting a personal triumph for him. When he had left the Superintendency of Public Education in 1892, it was largely because of friction between his office and that of the President of the University of the State of New York. Now his political friends had combined the two offices in the Commissionership. Its incumbent was given ''power to create such departments as in his judgment shall be necessary,'' and to appoint or approve the appointment of all officers; and Draper was thus virtually asked to recreate the Department of Education in the greatest State and the State where the department was most powerful. But he was influenced by other considerations as well. He had unfortunately become sensitive over the lameness under which he labored after 1902, when he had been thrown from his carriage while driving a spirited team—he was fond of driving about the University—and had had a leg amputated. He had returned to work again that fall, but, as he said, he ''could not escape the feeling that it would be better for the University to have a President who was without any physical disability.'' Finally, he saw that his great work was done, and that it was time for a President of different character. The aggressive man of affairs had

had his day; it was time for the man who, while as trained an administrator and under the spur of necessity as great a fighter, was primarily a scholar, able to develop the institution in every branch of academic growth. "The great steps which need now be taken in the advance of the University may better be taken under a new man of different type," he explained. He left on April 1, 1904, and after June Dr. Burrill became acting President.

A special committee of the Trustees spent some time in looking about for a successor to Dr. Draper; and its search led to the presentation of the name of Edmund J. James, who had been born in Illinois and had spent most of his life within the State. It especially appealed to Illinoisans that he was, as his nominators said, "familiar with our constitution, our laws, our free school system, the temperament, character, and resources of our people, and the history, traditions, scope, and possibilities of this great University." Dean Davenport was also suggested for the post. Towards the close of August Dr. James was elected, and though Northwestern University, of which he was head, upon learning that he was about to be lost, offered him counter-inducements to remain there, he was prevailed upon to come.

VI

THE UNIVERSITY AFTER IT FOUND ITSELF

Lines of University Development. Growing Appropriations and the Mill Tax. Doubling of the Number of Buildings. Special Expansion in Agriculture and Engineering. Lincoln Hall and Graduate Work. The Courses in Business Administration. Unification of Science and Liberal Arts. The College of Medicine Gains Its Feet. The University Reaches State Leadership.

THE keynote of Draper's administration had been material growth according to a policy which made for sure and exact discipline upon a plane set none too high. That of Dr. James's administration was to be material growth upon a policy making for the imbuing of the University with advancing intellectual ideals. His part in the growth of the University was to be as prominent as had been his predecessor's, for his personality from the outset impressed itself upon every part of the institution. The new President was not yet fifty, but with a long record of administrative work in education. In point of scholarly equipment, he was much better prepared than any previous head. He had been born in Jacksonville at the time Turner was busiest there with his propaganda. He was educated at the State Normal School, at Northwestern, at Harvard, and at Halle, where he received his doctorate in 1877. After a period in normal school work in Illinois, he became professor of public administration at the University of Pennsylvania, remaining there twelve years, organizing the graduate instruction, and for a time directing the Wharton School of Finance. He left in 1896 to become professor at the University of Chicago and director of



President Edmund J. James

its extension division, whence in 1902 he was called to become president of Northwestern. Thoroughly conversant with affairs in Illinois, and able to deal with Legislature and public more tactfully than Draper, if not so doggedly, he had also a trait which none but Gregory had possessed—high enthusiasm in looking to the University's future.

His installation took place more than a year after he entered upon his duties, in the fall of 1905, and was attended by many educators of prominence. Three conferences were held, on university administration, on commercial education, and on religion in the State University, with Presidents Remsen, Strong, Angell, King, Chancellor Andrews, and others speaking. But the principal feature of the exercises was the emphasis laid on the connection of the University with nation and State. Attention was called to the military side of its training by delegations from the army, militia, and West Point. Federal officials, especially of the Agricultural Department, were asked to come. The Governor was present, with Illinois Congressmen, judges, and legislators. The officers of the counties and principal cities throughout Illinois were invited, and many were in attendance. Due recognition was given the teaching body of the normal, high, and graded schools. Delegates were also present from a score of agricultural, horticultural, and engineering societies, as well as from scientific bodies not connected with education. In short, the installation was meant to call national attention to the progress of State-supported education in the United States, and to point out how it not only supplemented the great endowed institutions, but had become a scientific and educational arm of the Government—an ally of public administration. The students played their part with a night

parade with floats; and during the week the Woman's Building was dedicated.

In one of his interviews with Dr. James, Draper delivered what he believed a sage word of advice. The University, he thought, had forced the State to as high a limit of generosity as it would go. The task to which Dr. James should set himself was the raising of scholarly standards and the improvement of instruction—to internal, not external development. That the President did not follow this advice both circumstances and his astuteness may be thanked. As it happened, in 1904 the State's expenditures for all purposes were just beginning a marked expansion. It was the very time to drive home with all emphasis the University's needs and to obtain some permanent provision for the future. Within the decade the State's annual budget more than doubled. Of this increase the University had to ask for its share at the psychological moment. Despite the State's increasing wealth, had it waited till 1915 to make its demands for redoubled State support it would have met the cold shoulder of a reaction towards general economy.

The new President soon showed his ability: six months after he took office he entered the legislative lists, and obtained an advance of about a half million over the final appropriation under Draper. Two years later nearly $400,000 more than this was obtained, or well over two millions, and while the University had asked a round million for buildings, it felt fortunate in obtaining half that amount. Thereafter the Legislature was forced to one concession after another. For the third biennium (1909) it granted over three millions, and two years later not only added some $200,000 to this, but passed the mill tax law which made the Uni-

versity's financial future forever reasonably sure. To do this required not only hard and consistent effort on the part of the President and faculty; it required that the State, steadily changing its attitude of indifference for one of hearty approbation of the University, be made to express that approbation in terms that the legislators must understand.

In all his activities at Springfield, President James employed the methods that had been so successfully introduced by Dean Davenport for the college of agriculture. The corps of influential farmers that the dean had marshaled was induced to speak not only for the college but the University. A large number of other interests were brought behind it. In 1906 the Illinois Bankers' Association was persuaded to urge a large appropriation for the business courses, and it was followed by insurance bodies. The Clay Workers' Association and other ceramic societies seconded the request for ceramics appropriations. An application for money to found a veterinary college was supported by the Live Stock Breeders' Association, the Union Stock Yards, and other bodies. The State Medical Association took keen interest in the legislative attitude towards the medical school. The heads of the normal schools and five different teachers' associations repeatedly petitioned for the establishment of a school of education. Whereas in 1902 the State College Association, composed of the presidents of the small colleges, had been on the point of inaugurating a systematic campaign against the University, Dr. James persuaded them to unite in a request to the Governor to increase its appropriations. Late in 1910 a committee of agriculturists visited nine other State institutions teaching agriculture, and returning to Illinois, determined where the college at

Urbana was deficient and let the Legislature know. Even earlier representatives of sixteen railways, under President Delano of the Wabash, drafted resolutions supporting the University in its fight for the railway courses. To the alumni Dr. James appealed as his predecessors never had. You will do a great service, he urged them in 1909, "if you yourselves will write to your representatives in the Legislature, and if you will get your friends and acquaintances in your legislative district to do the same thing. . . . If your residence is no longer in the State of Illinois, you surely know some people in the State whom you could persuade to exert their influence along the same line. The members of the Legislature are friendly to the University, but it is natural that they should feel that if the people of the State really want a great University they should be willing to express that desire." The Western Society of Engineers and similar societies also came to the University's assistance at Springfield. By 1911 it was a dull legislator who did not fully appreciate the interest of the public.

The session of 1909 witnessed a more stirring discussion of University requests than had any other. Opposed to the University's chance of obtaining its three millions were the facts that other public demands were also great, that the State income was not materially larger, and that the Administration was interested in making an economical showing. The opposition took the double form of criticism of the University and attacks on specific items. A special attempt was made by President James to obtain funds for raising salaries, and to call attention in this connection to related deficiencies of the University as compared with other institutions. Senate and House were argued into the passage of a

resolution recognizing the insufficiency of the scale of pay, and calling on the Trustees to adopt such a policy "as in their judgment would attract to and retain in the service of the University and the State the best available ability of this and other countries." It was made clear that Illinois was losing valuable men to other colleges. The press earnestly supported President James. The Chicago *Tribune*, for example, compared the State's treatment of its University to that which Wisconsin accorded its institution at Madison, and proceeded: "The University of Illinois asks large sums now because it has not been nurtured as it should have been some years ago. . . . The plain facts are that the University needs additional schools and departments. Its teachers ought to have better pay. There should be no question about the salary of its President. Every dollar spent for advances is quite likely to be repaid in indirect ways, all leading toward the greatness of Illinois." The most damaging blow to the University came in the dissensions in the Board of Trustees, culminating when Mrs. Carrie T. Alexander, a member of willful mind, spoke before a legislative committee in terms that were generally regarded as denunciatory of the University's requests. Her action was at once condemned by the Board, by student organs, by alumni bodies throughout the country, and by the press. Fortunately, it had little effect. Gov. Deneen, too, stood by the University; and though final and determined attacks were made upon the items for the graduate school, the law school, and the library, they were unsuccessful, only certain requests for buildings suffering.

The battle for the epoch-making mill tax law, which placed the University beyond the mere passing whim of the Legislature and gave it not only a steady income,

but one of the largest university incomes in the world, was as hard. The President carried to Springfield, and gave currency over the State, figures which powerfully contrasted Illinois with other universities and colleges. It was shown that the cost of buildings erected at Illinois was under one and a half millions, much less than at any of the other great universities, and less even than at Iowa State College, Northwestern, or the combined universities and agricultural colleges of Kansas, of Ohio, or of Washington. The library of Illinois, then holding 160,000 volumes, was shown to be eleventh in the country, though the University was not near the collections of any large city; it was less than half as large as those of Cornell, Chicago, or Pennsylvania. The total annual income of Illinois was shown to represent about thirty cents per capita of State population, while California's was over a dollar and Wisconsin's about seventy cents. The ratio of its income to the property value of the State was lower still, placing it ninth among the State universities. President James asserted that the Legislature had given about $150,000 a year during the last six years for buildings, and that at this rate it would take half a century to catch up with the actual existing needs of the University. Money was shown to be badly needed by the graduate school, which had more than fulfilled the expectations of its growth, by the overgrown engineering college, and by the struggling law college.

The President was much assisted by the attitude of Gov. Deneen, who presented in his message of 1911 a more careful review of the needs of the University than it had ever had, and suggested the many additional functions it might perform. The newspapers, which had not warmed to an older proposal for a ten-million-dollar bond issue to form an endowment for the Uni-

versity, gave general support to the mill tax law. They laid special emphasis on the fact that it would give the University stability in development and almost complete freedom from politics. The agricultural investigating committee already mentioned proved of service, as did the alumni in the Legislature. Senator Dunlap deserves a special word: two years before he had carried a mill tax bill based on a one-fifth valuation of property through the Senate; and he now first had a three-quarter mill tax measure based on a one-third valuation passed, and then obtained the passage there of the mill tax bill (on the new one-third valuation) which President James had had introduced in the House. The lobbying of the University officers for this and for the huge appropriation of five and a half million dollars which they had requested was redoubled, until the *Illini* protested against the time they were spending in Springfield. Finally the measures went through, directing that a mill tax "for each dollar of the assessed valuation of the taxable property of this State" should be "paid into the Treasury of the State and set apart as a fund for the use of the University," to "remain in the Treasury . . . until appropriated to the use of the said University."

The new law meant not only a strengthening but a simplification. Theretofore two budgets had been necessary: one to be presented to the Legislature representing departmental needs, the other to be drawn up by a conference of the University's departments after the Legislature had determined how much of the total it could give. It was still necessary to present a legislative budget, to indicate how the University proposed to spend the money appropriated from the proceeds of the mill tax, but this budget could be much more nearly

final. As a general basis for its future drafting, the college faculties were asked in 1912 to present a series of reports upon the most imperative demands of the departments in those faculties. There was no longer necessity for a succession of faculty visits to Springfield, no longer the old motive for strenuous effort in enlisting outside influences, no longer a hampering uncertainty of the future. President James wrote in 1912 that "in all probability the funds of the University will be considerably increased." In 1913 the proceeds of the tax were sufficient to bring the biennial income to $5,623,000, and in 1915 to the round sum of $6,200,000, though even this is insufficient for its growth. In both these years the Legislature made the appropriations with little opposition. Some apprehension was felt when in 1912 a Democratic victory elected Gov. Edward F. Dunne; for a change of party is likely to bring about certain disturbing innovations. But the Governor proved himself a firm friend of the institution. In 1913 weak attempts were made to repeal the tax law or reduce the tax rate, and to impose on the mill tax fund the payment of interest on the endowment, and the additional appropriations for the Water Survey, Geological Survey, the State Entomologist's Office, and the State Laboratory of Natural History, but they proved abortive. In 1915 an effort was made to hold in the treasury some of the mill tax fund, but an appeal by the President to the alumni and others brought upon its instigators such a shower of protests that they were glad to give it over.

Between the coming of Dr. James in 1904, and 1916, the number of buildings at Urbana more than doubled, rising from twenty-four to sixty. The increase was regular, each year seeing one or more new buildings,

until between 1910-11 and 1911-12 there was a sudden leap from thirty-six to forty-four. In the early years of the administration, the slowness with which the list of structures was increased was a cause of much vexation. Of large buildings, only the Auditorium was obtained in 1905, and the sum set aside for it was reduced in legislative committee from $150,000 to $100,000. It seemed impossible to obtain for this a substantial building to seat 2,500 people, and several of the Trustees were in favor of holding the appropriation and asking the next Legislature for an addition to it—asserting that the building should house more than 2,500, anyway. But a commission consisting of several Trustees, the President, several of the architectural faculty, and two alumni, Lorado Taft and Clarence H. Blackall, reported in favor of proceeding, and the plans of Mr. Blackall were later accepted. Something monumental was desired: built of brick and stone, the structure proved so staunch and yet beautiful that it has fully answered its purpose. Unfortunately, it no sooner came into use in 1908 than it was discovered that it had an echo like the baptistery of Pisa, and to correct this the physics faculty spent years of intermittent effort. Meanwhile, in 1907 the University had received $250,000 for the Physics Building, and $150,000 for an addition to the Natural History Building.

The choice of plans for these latter buildings, and all to follow, involved some difficulties, for in 1907 a law became effective requiring all structures built by State money to be upon designs by the State architect. The University had little relish for an arrangement by which its buildings were made the product of an officer of problematical ability at Springfield. It suspected, with reason, that the State architect might insist upon utility

and economy at the expense of beauty. With such attractive if heterogeneous buildings upon its campus as the Library, Agricultural Building, and Auditorium, all the work of alumni, it preferred to make its own slow progress towards a distinctive architecture. But it proved impossible to escape the law or to have it modified, and after some delay the Trustees were forced to ask State Architect Zimmerman to consult with the President and send plans as soon as possible. Happily for the University, both buildings were erected only after the faculties concerned had fully expressed their ideas; and the Physics Building in particular embodied an expert solicitude for solidity and the best use of light. As it neared completion, the authorities forced the removal of the trans-campus line of the local street railway, then running through Green Street, the vibration from which would have affected delicate instruments, to the present location to the south.

Nettled by the tardiness with which provision was made for construction, early in 1909 the Trustees adopted a report setting forth the urgent need for no less than twelve new buildings, totaling $3,250,000. These included an administration building, an addition to University Hall, an armory, an addition to the Library, agricultural buildings reaching an aggregate of $750,000, a building for music, art, and architecture, an enlargement of the Engineering Building, a museum, a testing laboratory, a transportation building, and housing for the medical college to cost $500,000. For the time, however, only four main structures were requested—an administration building, an armory, the addition to University Hall, and the addition to the Library—with some smaller items for the college of agriculture. Of these was granted only the new Uni-

versity Hall—"by common consent the most necessary building for the University," President James said. Cramped as the zoölogical and botanical departments had been in the old Natural History Building, cramped as the physics department had been in Engineering Hall, their condition had never been so bad as was that of the literary and graduate departments, crowded, with the business courses, the academy, and the school of music, into the aging University Hall. With the quarter million allowed, the University and the State architect determined to erect a stately memorial building to be known as Lincoln Hall, for advanced work in liberal arts and for the housing of the seminar libraries.

Two years later, however, in 1911, the University received money for the construction of a large number of buildings. For the new Armory enough was appropriated to rear the largest structure of its kind at any college. Its huge steel spans soon after began to go up farther south than any large University building had yet been placed. The military department protested with temporary effectiveness against all proposals for its use as a combined military hall and gymnasium. To the school of commerce was given a sum for the first unit of a large building. Dean Kinley asked for a favorable site, asserting his conviction that the growth of the school would soon make necessary a larger structure than Lincoln Hall, and that plans must be laid for one that could be incorporated into a comprehensive hall. It must not be placed too far from the Library, nor yet from the college of engineering, 300 of whose students it trained yearly in elementary economics. An addition to the Woman's Building was authorized, and plans were carried out by the State architect, despite all protest, which ruined the appearance of the older

portion, though the space was more than doubled. A three-story Transportation Building was begun, a locomotive testing laboratory built, a dairy barn opened, and the Law Building[1] remodeled. Finally, over $20,000 was given for a kilnhouse for ceramics, and to this having been added a sum appropriated the mining engineering department for equipment, a building was erected to serve the two, upon lines that gave it also room for future expansion.

The largest additions since then have been in the completion of the Chemistry Building, in an addition to the Commerce Building for administrative purposes, in the Education Building, in the Women's Residence Hall, and in a large Stock Pavilion; while a considerable amount has been spent upon a final addition to the Natural History Building and other minor erections. The older portion of the Chemistry Building had become intolerably crowded: the demand for chemists as such was always growing, while at the same time the agricultural and engineering colleges required courses in chemistry of large elements in their registration. Completed as a hollow square, the structure has more than doubled its former space. The Administration Building greatly relieved the Natural History Building, which was again becoming congested, for the offices of the President, registrar, comptroller, dean of men, and others were removed to it. The Stock Pavilion is used not only for the judging of stock, but for large, informal assemblies, as of the farmers gathered for extension work. The Women's Residence Hall, erected at one of the points where the campus extends farthest into Urbana and after plans which make it architecturally harmonious with the Woman's Building, will house about

[1] The college of law had occupied the old Chemistry Laboratory.

a hundred students. In erecting the Education Building, the University has drawn plans which will admit of the installation of a training and experimental high school under its roof.

Of the smaller structures, the Genetics Building and Vivarium have been of a benefit beyond their size to the scientific departments, while the courses in ceramics now have a $140,000 building of their own—one of the most ornate on the campus, and indicative of the opportunity Illinois craftsmen have in her clays. The Smith Memorial Building, the first to represent a private benefaction, was commenced late in 1916, and will give its first real home to the school of music. The period has been marked by the acquisition of considerable tracts of land, about $80,000 having been spent for enlargement of the campus between 1905 and 1912, and nearly $250,000 for that of the campus and farm since. Both north and south of Springfield Avenue, Urbana, the University has bought lots which are gradually giving the northern part of the campus one very solid arm of a cross there. On the opposite side the corresponding arm has had its beginning in the purchase of over half a block south of Springfield Avenue in Champaign. Land values are inflated and growth in this district is by a slow process of purchase, but a way must be smoothed for expansion of the engineering group. The southern campus has been filled out, land bought for athletic purposes adjoining the Illinois Central tracks, and the farm much enlarged—there now being about 1,160 acres in all at Urbana.

The growth of the University's gross registration quite kept pace during the President's first thirteen years with that in building and financial resources. During his first year there were less than 4,000 students—less,

indeed, by several hundreds; five years later there were 5,000; seven years later still there were about 6,800, and the increase promises to continue at ten per cent. yearly. At the first commencement over which President James presided there were awarded less than 300 degrees, and at that of 1916, over 1,100. By colleges, this registration showed in his first decade engineering consistently in the lead, literature and arts in the second place, and agriculture in third. But since the union in 1913 of the colleges of science and of literature and arts, the registration in liberal arts has easily been first. Indeed, absolutely as well as comparatively, the college of engineering has temporarily lost ground. In 1909-10 there were over 1,300 students in it, and in 1913-14 not many more than 1,200. In the latter year literature and arts had 1,854 students, and the college of agriculture 1,171. Geographically, the students now represent practically every State and a score of foreign countries, over 800 coming from outside Illinois.

The figures for registration, however, fail adequately to give the comparative measure of college development. It was the college of agriculture that expanded fastest and most powerfully, that impressed itself most upon the people of the State, and that assumed in many ways the real primacy at the University. This vigor rose in part from the fact that it had so much growth to make: it was a weak college when Davenport and Burrill undertook its regeneration, and it was just finding its feet when the administration began. Yet in competition with vigorous and actively growing neighbors it took such a station that at the end of a decade the President admitted, in tacit reference to it, that "the University of Illinois is a one-sided institution."[1] No other expanded its enrollment at the steady rate of a twenty

per cent. increase per year. No other college developed so many new courses, or enlarged old ones so well. No other did so much in direct service to the people, not merely of Illinois, but of the section. None, in the review of ten years' work in 1914, could make quite so impressive a showing as did Prof. J. C. Blair for it. "Ten years ago there were registered in the college . . . 339 students. During the past year there has been a total enrollment of 1,014 students. Ten years ago there were a faculty . . . numbering 27. During the past year we have had a faculty numbering 136. Ten years ago we had a graduating class of 10 students. The past year . . . we have conferred 143 degrees." In the ten years the total expenditures of the college had grown from $150,000 to three-quarters of a million.

So great was this growth that in its first years other universities frequently predicted a collapse under the strain. Dean Davenport assigned four reasons why this did not occur. First, the growth was the result of a spontaneous determination by the farmers to make it a leading agricultural institution; second, special funds were appropriated for each special purpose, and back of each was an organized group of agriculturists interested in that field; third, the college was organized with few departments, each with its own funds and a large measure of administrative independence; fourth, it early inspired support by rendering substantial service to State agriculture. The system of carrying out experiments with the assistance of advisory bodies was not only retained, but enlarged. In 1907 an act to extend the work of the college and station provided that not only the associations previously named, but ones representing commercial floriculture, should appoint such a committee. The criticisms and suggestions of the ad-

visors, all shrewd men and some scientifically trained, directed the investigations towards the objects of greatest importance, and kept them from becoming academic. The plan enhanced the prestige of the University, encouraged those with agricultural ambitions to seek it, and assisted graduates in finding positions. After the enactment of the mill tax law the existence of the committees was legally terminated, but in 1914 their continuance was provided for by voluntary action of the University. It was really a sub-committee of these general committees which in 1910 reported that the needs of the college were so urgent that its position "as a school of the first rank was at stake," and forced the passage of bills appropriating nearly $1,000,000 for it and the experiment station. It was also in part owing to this system that even when, as up to 1910, the college was receiving much less than other leading institutions, the station was granted from two to five times as much as its rivals.

By an understanding reached when the bill for the division of the agricultural and general university funds was passed, the college was to erect at least one permanent building each year till the agricultural interests were fully housed. In pursuance of this there went up in succession the Agronomy and Horticultural Buildings, the Farm Mechanics Building, the Beef Cattle and Dairy Buildings, and several greenhouses—enough to provide for its growth to 1912. The number of departments remained as in Draper's time, except that one quasi-department has recently been founded—that of agricultural extension, with work in non-technical extension touching the problems of country life. But the scope of instruction was greatly increased, twenty-five courses in horticulture, for example, growing into

about fifty, and eighteen in agronomy into thirty-one. Plans for expansion received only one sharp setback, when in 1909 the Legislature refused to support proposals for the opening of a veterinary college in Chicago. The Live Stock Breeders' Association and Union Stock Yards had brought up the question in that city, and a suitable site was offered within the yards, together with $250,000 for the erection and equipment of buildings, provided the University collect a faculty and maintain instruction. President James had made a trip to Europe to inspect veterinary colleges there, but since the Legislature's refusal the project has never been revived. Since 1912 the college has been greatly hampered by lack of space; it has proved necessary to utilize every square foot, to make all Junior and Senior courses elective, so as not to block the graduation of men who could not be given laboratory space in set courses, and to urge individuals of mediocre academic ability not to remain in college after one year. The result has been that it no longer holds place as first in enrollment in America, and is embarrassed in many ways.

The college of engineering lost in 1905 the leadership of Prof. Ricker, its head for a quarter century; and at the same time was perfected the organization of the engineering experiment station as a separate division of the University, under Prof. L. P. Breckinridge as director. For two years Prof. J. M. White took the place of Dr. Ricker, searching meanwhile for a permanent successor. The last was found in Dr. W. F. M. Goss, who had made his reputation at Purdue, and who began his duties in 1907. In 1909 Prof. Breckenridge resigned, and the dean has since acted also as director of the experiment station. But these

changes affected little the even development of the college, or of the station, which has become one of the most distinctive parts of the institution, and has been imitated all over the country. The growth of this college has been in many ways as swift, vigorous, and impressive as that of the college of agriculture.

The chief outward events in this development were the establishment of the department of railway engineering in 1906; the reëstablishment of mining engineering in 1909; and the beginning of the Miners' and Mechanics' Institutes and the Short Course in highway engineering in 1913 and 1914 respectively. The first followed upon the perception by President James of the fact that the University had a number of courses in engineering and business bearing upon preparation for railway work, and that it would be easy to integrate them into a school of railway engineering and administration. Four courses were established, of which that of railway administration is in the college of commerce, and those of railway civil engineering, railway mechanical engineering, and railway electrical engineering are in engineering, under the dean and Prof. E. C. Schmidt. The registration has been disappointing, but there are indications that it will grow. The department of mining engineering grew out of a movement inaugurated at a Fuel Conference held at the University in 1909—a meeting called in pursuance of the President's policy of enlisting all possible interests in support of the institution. A committee was appointed, representing mine operators, workers, inspectors, and manufacturers, to urge an appropriation for the projected department, and it was granted. Prof. H. H. Stoek, who was appointed its head, was asked to spend some time in studying mining conditions in Illinois before formulating his

courses. Here, too, registration has been disappointing, but much useful work is being done.

Part of the work in the mining engineering department, all that of the engineering experiment station, and the highway course are rated as extension activities. Even preceding the Cherry disaster, a mine rescue station had been established and equipped by the Federal Government in connection with the first. The short course in highway engineering, often held at the time of the short courses in agriculture and ceramics, was evoked by the demand among county and township officers for practical information upon the building of roads and bridges. The work of the regular instructors is supplemented by lectures by experts in highway building. As for the experiment station, its activities have been pushed upon the lines first laid down, and have fast broadened. It had little more than a paper existence till in 1905 the Legislature repeated the appropriation of $150,000 made for general engineering purposes two years before. The first grant had been absorbed by the demand for equipment; the second could be devoted largely to research. In imitation of the advisory bodies in agriculture, there were early instituted two conference committees of outside authorities in technical fields: one on tests of Illinois coals, and one on electric traction tests. By 1915 no less than seventy-six bulletins had been published.

The faculty of the college of engineering more than doubled during a period in which the registration increased one-third, so that a much richer course of study was made possible. In architecture a single course in architectural engineering grew into a number almost sufficient to justify a separate department. The response of the University to the advance in electrical

science was manifest in the increase from thirty-five to one hundred courses. Thanks to the provision for ten research fellows in the engineering experiment station, and to the appointment of such experts as Charles R. Richards, E. J. Berg, and F. H. Newell, the development of graduate work has been especially notable; by 1912 there were over forty graduate students—and in engineering postgraduates are seldom drifters. Another notable fact is the greater hospitality of each department to students outside it who wish to elect of its work. Of old, civil engineering, for example, was largely a law unto itself. Now it offers highly technical courses to architectural engineers, others to students in geology, others to landscape architects, and others to mining engineering students. The one department given a large building for its exclusive use, that of physics, has grown with especial vigor. Prof. A. P. Carman, who had been the mainstay of this branch of instruction since 1896, had in 1915 a faculty of fourteen working with him. Elsewhere the college has quite outgrown its facilities, and in some divisions, as architecture, the demand for more room is urgent.

Even before the completion of the Natural History Building, the administration had witnessed some material additions to the resources for scientific teaching. The college of science lost its dean in the same year that Dean Ricker resigned, for Prof. Forbes, who had been granted a special entomology building, wished to devote himself almost exclusively to his work for the State. His place was taken by Prof. Townsend. During the same year the State Geological Survey was instituted, and the important courses in ceramics, which at once drew students from the four corners of the country and which greatly strengthened the work in chem-

istry and geology, were first opened. In 1907 Prof. A. V. Bleininger came to instruct in ceramics, and Prof. W. A. Noyes left the Bureau of Standards to head the chemistry departments; in 1908 Prof. H. B. Ward became head of the zoölogy department; and in 1913 William Trelease took a professorship in botany beside Charles F. Hottes. But it was the erection of the huge additions to the Natural History and Chemistry Buildings which permitted the college to expand as it ought.

In literature and arts, which Dean Evarts B. Greene ably guided for seven years beginning 1906, the years following 1905-06, when the Board authorized the filling of three important new professorships in modern languages, English, and classics, were especially notable in linguistic fields. Instruction in all the modern foreign tongues was in 1906 combined in one department, under the scholarly Gustav E. Karsten, and after his death in 1908 the departments of Germanic and Romance languages began their differentiated development. Dr. Julius Goebel at once took charge of the former; the latter, after obtaining for a time the services of Prof. Raymond Weeks, was handicapped by the want of a head till the appointment of Dr. Kenneth McKenzie in 1915. With the English department, under Dr. Dodge, had been united that of rhetoric, under Dean Clark, who became chairman after the union. It was expanded by the addition of subordinates, and given a new solidity by the coming in 1907 of C. N. Greenough, who temporarily became head, Jacob Zeitlin, and Stuart P. Sherman. One distinctive new department has in recent years been organized—that of Scandinavian languages, under Prof. G. T. Flom. In history the staff was also enlarged, and the University began in earnest its researches into Western records, Dean Greene and Prof.

C. W. Alvord taking over direction of the State Historical Collections. A few years later a special position was created with a view to the encouragement of the study of Latin-American history. Education profited by the fact that Illinois grew more and more to be a great producing center of high school teachers, and to carry on much quasi-extension work among them. The chairmanship of the department, left vacant when E. G. Dexter was appointed Commissioner of Education in Porto Rico, was filled by Prof. W. C. Bagley, while at the same time a school of education was organized to embrace all courses of pedagogical value. The department of political science, to which Prof. James Garner had come in 1904, and which Prof. John A. Fairlie joined in 1911, began midway in the first decade of the administration to make use of the opportunities in a State University for practical research and to attract a number of graduate students; later it took the first steps in extension work. In all the departments of this college the greatest impetus followed the completion of Lincoln Hall, which took them out of a veritable straitjacket.

The consolidation of the two colleges was dictated by the plain consideration that they were seriously duplicating each other's work. At the same time, each was expanding the privileges of election from the curriculum of the other, and this liberal treatment of electives demanded a single administration. The faculty in literature and arts approved of the alliance long before that in science would consent to the step, but it was finally effected; and in the spring of 1913 Kendric C. Babcock, a former president of the University of Arizona, became head of the college of liberal arts and sciences. A marked increase in efficiency was soon manifest. This union of two of the most important Uni-

versity divisions was somewhat offset when four years later the courses in business administration were converted into the college of commerce and business administration, with N. A. Weston as acting dean. The skeleton courses in banking, insurance, journalism, and so on instituted under Draper had been filled out early in the administration under the direction of Dr. Kinley. The faculty had been increased, Prof. Maurice Robinson having come in 1901, Prof. E. R. Dewsnup in 1907, and Prof. E. L. Bogart in 1909; a separate building had been provided, and a genuine college spirit grown up in it; and the registration had by 1917 exceeded 700. The courses constituted one of the most progressive divisions of the institution, and one which most enlisted the interest of the State; but the creation of the college represented a sense rather of the promise of the future than of completed achievement. In his long work for this division of the University Dean Kinley built up a high regard for himself and the institution among business men of the State, and one very valuable to the University in every way.

The graduate school grew up with the various colleges, and especially with literature and arts and science. But it had also an administrative history of its own. Its financial basis was independent, and the President saw that the Legislature's support was generous. In 1907 a grant of $100,000 for the biennium was made for the school—the first legislative grant specifically for graduate work in America—and this, which assured its vitality, was duplicated in 1909. Dr. Burrill resigned as dean in 1905, and was succeeded by Dr. Kinley, while a special faculty was constituted to take charge of its policy and curriculum. A part of the appropriations, and of the larger grants made later

from the mill tax, was set aside for fellowships and scholarships, and the remainder for research and the school's publications. The chief of these were the University Studies, which had been commenced under Draper, and the *Journal of English and Germanic Philology*, founded by Dr. Karsten and taken over at his death under the joint editorship of the two departments. The latter was a creditable if highly specialized periodical, and the Studies, which were used by the faculty as well as graduate students for publication, were well edited. Money was also spent for the Illinois Historical Survey.

Strong efforts were made to bring the school up to Eastern standards, and the University quickly began to succeed. No one was allowed to offer graduate work who had not fully demonstrated his ability in research; candidates for the doctorate were required to print their theses; and strict methods of examination were devised, with interdepartmental representation at each oral hearing. The challenging of candidates in the German department by members of the English faculty at one time bred bad feeling. From the outset candidates for masters' degrees had to offer theses. The school at first had many students *in absentia*, but their numbers were reduced. Then came the transfer of advanced work in liberal arts to Lincoln Hall, with its admirable seminars, and the consequent energizing of scholarly work; by 1915-16 there were nearly 550 students enrolled. It is again to Dean Kinley's enterprise as regards elements of growth and expansion, and his conservatism in all that touches the standards of the school, that graduate work owes most.

The long neglect the library had suffered furnished one of the chief difficulties against which advanced work had to struggle. The University labored hard to

awaken the Legislature to its needs in books, and obtained annual grants of $25,000, later increased to $50,000—the latter nearly as large a sum as any other institution in America was spending, and sufficient to disturb some book prices. Such steady progress was made that whereas when Dr. James had come the library held but about 75,000 volumes, by the end of 1916 there were nearly 400,000 bound volumes and 100,000 pamphlets. Officers argued to the Legislature that the remote situation of Illinois made special provision necessary, and the President once compiled figures to show that the University lagged behind Wisconsin, California, and Leland Stanford. In spite of a legislative blindness that was once about to halve the appropriation because of a shortage of shelving, Illinois has come to possess one of the twelve largest University libraries in the country, and one of the two or three fastest growing. In 1907 the first important item in a series of special foreign acquisitions, the Dittenberger library of the classics, was purchased. Two years later P. L. Windsor was appointed librarian and director of the library school.

A few words suffice for the history of the professional schools at Urbana during this period. The college of law increased slowly in registration, though its reputation by no means came to equal that of the schools of Chicago or Northwestern University. A long period of legislative disfavor was ended when in 1909 a grant was made for a law library, and the future was thereafter thought secure. In 1907 the entrance requirements had been fixed at one full year of University work, and in 1915 they were made two; while Dean Harker labored till his resignation in 1916 to make the instruction by the small faculty thorough. The standards have hence been honorably high. The State library school

has grown to a total of fifty students, nearly all women —a good registration when it is considered that there are now nine or ten such schools in the country. In 1911 the entrance requirements were made four years of college work, thus placing the school on a graduate basis, and much strengthening its work. The school of music has needed strengthening and has received it. A score of courses have grown to three score, instruction is given on additional instruments, and a one-year course in public school music, leading to a teacher's certificate, has been initiated. Director John Lawrence Erb has a faculty of about twelve. But the school looks forward to its release from University Hall to afford it its proper position. As for household science, Miss Bevier's work is half again as broad as it was, and the greater space in the enlarged Woman's Building has enabled her to build up the largest department of the kind in any State institution. There are still two classes of students—those in household science proper, and those in liberal arts who make a "major" of the subject. Its scientific requirements in chemistry render it difficult.

By far the darkest page in the history of the colleges relates to the Chicago departments. President James entered office with no illusions as to the possibility of "making medical teaching pay," and the Trustees had largely lost their early belief in it. Yet the University not only reaped in full the fruit of its early errors, but it was prevented from exercising a new and better control as soon as it might, and after a temporary surrender of its medical work had to make a new beginning at great expense. At first all concerned entertained hopes of persuading the Legislature to purchase the property of the College of Physicians and Surgeons,

and incorporate it as an integral part of the University. Dean Quine offered the University his library if this were done promptly, and others promised gifts of stock. In 1907 an appropriation of $386,000 actually passed the Legislature, but was vetoed by the Governor. Hope for State action gradually glimmered, and meanwhile the institution affiliated with the University was losing ground as against endowed colleges.

The storm broke fiercely in 1910. The Trustees and President had done what they could to better the standards of the college, as by an arrangement for encouraging students in the six years' course. But under the agreement which reserved to the faculty of the college all initiative in its management this was little. The faculty, moreover, showed an increasing representation of stockholders, or of those who controlled the hospital facilities it used. Finally, early in 1910 the national Council on Medical Education served notice that it was preparing a report on the acceptable medical colleges of the country, and would not include the University's in its list. It had found three main defects: the non-enforcement of the entrance requirements, the fact that advanced standing was granted for work done in low-grade medical schools, and the fact that six faculty members were also on the faculty of a night school of medicine described as one of the weakest and worst-equipped in America. At the same time the Carnegie Foundation stated that its examination of the department—prompted by the University's application for the benefits of its retiring allowances—had confirmed its suspicions; and its head wrote that "as the situation now stands it seems to me that the University is injuring medical education, not helping it." A little later the University had notice from the Association of American

Medical Colleges that the department did not fulfill the requirements it had set as a minimum, with an inquiry as to when it would begin enforcing proper standards of admission. Only a high school diploma was required, whereas the medical schools of the Universities of Michigan, Wisconsin, and Minnesota demanded two years of college work.

The University at once increased its pressure on the college for a betterment, and enforced rulings that no credits would be received from colleges of inferior standing and that no faculty member would be permitted a connection with any other institution. Equipment also was to be increased. But the Dean was certain that with these steps the college would cease "to be self-supporting . . . and that it will never be self-supporting again. In my opinion the college cannot furnish better teachers and more of them and more equipment out of its earnings. It has already gone beyond its powers in satisfying the demands of the University." In 1910 the old agreement had to be abrogated, and a new one executed, largely on lines suggested by Gov. Deneen. The University took absolute control of the medical college, the lease was reduced to one year, and the University was authorized to buy the plant upon consent of the Legislature. The next autumn the Trustees, to whom President James had presented a mass of material on the development of medical education, asked for a sum for the maintenance of the college. The Legislature duly appropriated $60,000, and then an unforeseen disaster occurred. The State Homeopathic Medical Association, angered that the allopathic method should be thus recognized, applied for an injunction to prevent the payment of the funds. Its ground, that amendments to the bill had not been

printed before final passage, as required by the Constitution, proved valid, and the appropriation was lost. The college had to be closed that summer.

This action was a great shock to the alumni of the college, and to all in the State interested in the advancement of public health. The State Medical Association appointed a member from every county to urge upon the Legislature and the University "the necessity for making adequate provision for this great public need." President James was in favor of founding a new medical school at Urbana, where one in time would doubtless have succeeded. But the college alumni took a decisive step in asking the Trustees if they would reopen the school provided the ownership of the stock was transferred to them. They having consented, early in 1913 the entire transfer was made: part of the stock was donated, and part had been purchased by funds raised among friends of State medical education. In March the University triumphantly took over the instruction in the old plant, and felt that all it had suffered was not in vain. The mill tax law had meanwhile made support of the college easy. The University has since followed a vigorous policy of expansion and development; the entrance requirements were promptly raised (1914) to two years of college work, and equipment increased. The college has been approved by each of the three bodies that once condemned it, and it is one token of its healthfulness that the registration promises soon to reach the figure of the days before the entrance requirements were changed.

The college of dentistry was closed at the same time as the college of medicine, and reopened a few months after the latter. Its record otherwise has been uneventful, except that in 1906-07 it experienced a sudden

and temporary decline in registration when its admission requirements were raised to full high school preparation. The school of pharmacy felt the same temporary drop at the same time, full high school work being required of candidates for the principal degree.

Repeatedly President James has emphasized "lopping off at the bottom" as concomitant to the process of building up at the top; and an outstanding event in the former program was the abolition of the academy. Since Draper's reorganization, this badly-housed, cheaply administered division had been prosperous, with over a dozen instructors and three years of work. But in 1909 the Carnegie Foundation questioned its right to existence, stating its doubt that the intermingling of secondary and college students and work was wholesome for University, high schools, or undergraduates. In 1910 the Senate recommended that the academy be discontinued in favor of a training and experimental high school, and upon the first part of this recommendation the Trustees acted, the academy finally yielding up its basement rooms to better purposes the fall of 1911.

The growth of the faculty, the expansion of resources, have made necessary constant if minor changes in University policy. One important way in which the new administration effected an improvement was in the steady elevation of salaries. A year after it began a committee of the Trustees reported that it had found the salaries not only too low, but full of incongruities. A study had been made of the changes within the decade in the rewards of men who had been with the University throughout that time. It was found that the average elevation in pay had been from $600 to $750,

but that one man had had no increase at all and others almost none, while two had had $1,500 and $1,680 respectively. The President compiled statistics to show that salaries were much higher in the East, and that there were a hundred positions at $4,000 or more at Harvard, while there were less than a dozen at Illinois. The Legislature's striking resolution of 1909 stating that "it is the evident will of the people of this commonwealth that the University of Illinois shall be so complete in its organization and equipment that no son or daughter shall be obliged to seek in other States or countries . . . advantages of higher education" concluded by urging upon the Trustees a policy that would attract and retain the best ability available. This action and the mill tax act have made possible a salutary change, so that there are now over thirty officers paid $5,000 a year or more.

Under Dr. James was first enforced the tacit rule that, outside agriculture and engineering, no man without a doctorate might, except under exceptional circumstances, rise even to the rank of instructor. As first applied, it was necessary to the fixing of University standards, but as with all comprehensive rules, there were cases in which it worked grievous injustice to able and earnest men, and the opinion has gained ground that it should be administered with flexibility. The President, too, long stood immovably beside a rule against nepotism that has only recently been modified by action of the Trustees. In 1898 the Board expressed its disapproval of the appointment of anyone related to a teacher or officer already connected with the University, and this was reaffirmed ten years later. In 1910 even stronger resolutions were adopted, and in 1913, after fresh discussion, the Board resolved that

only one member of a family should be represented on the University staff, and that this rule should be applied in making reappointments. But inadvertent violations occasionally caused trouble, while in the closely-knit faculty community, with its young men frequently marrying the daughters of older members, it repeatedly forbade the retention of valued newcomers. A few months after the passage of this drastic resolution, therefore, "the portion of the rule referring to relatives" was repealed, and a simple statement of intention to keep appointments on the merit basis retained.

Shortly after the opening of the administration tuition fees were temporarily reduced to $10 per semester, but since their restoration to $12 they have never been altered. In 1908 the Trustees revised the University statutes, and besides making them more definite, assigned the duties previously performed by the business manager to three men: the comptroller, the chief clerk, and the purchasing agent. It should also be mentioned that the University's attempt to find a place on the Carnegie Foundation failed that year, not only because the Foundation objected to the academy and the weak medical school, but because it still felt uncertain of the proper status of agricultural education. Later, upon the retirement of W. L. Pillsbury, the registrar, in 1910, and of Professors Burrill and Shattuck in 1912, the Foundation granted them pensions; but the University has virtually determined to institute its own pension system. Finally, there is to be mentioned the fact that the University has been given powers in the condemnation of land which are important to its campus development; and that in 1911 all permanent University employees, outside the instructional and scientific staffs, were unfortunately brought under the

civil service code and made removable only after a hearing by the State Civil Service Commission.

Only a few dissensions of even passing interest have marked recent University history. Early in this period a certain professor of physiology felt that the administration had not sufficiently recognized his work by increasing his salary and departmental funds; and while the Trustees were determining upon a rejection of his complaints, which they afterwards duly embodied in a resolution, he angrily resigned. He later published several long accusations that the President was governing the faculty autocratically, which were contradicted by statements of the faculty and Trustees. A few years later the refusal of President and Board to reappoint another faculty member for reasons affecting his personal character gave to a troublesome Trustee an apparent opening for similar charges against the administration; these the faculty in mass meeting unanimously and emphatically contradicted. The so-called phosphate stock affair early showed the anxiety of the University to act in matters affecting the State with a rectitude defying question. About 1904 Prof. Hopkins, eager to guarantee to the State a full supply of phosphate fertilizer, of which he feared an imminent shortage, had learned of the existence of a huge tract of phosphate mineral deposits in western Tennessee, about 200 miles from Cairo, which could possibly be obtained for Illinois farmers. A million dollar corporation was being formed for the shipment of phosphate from this area, and Dr. Hopkins not only urged Illinois capital to obtain control of it, but to encourage investment he himself bought bonds. Dean Davenport and others who shared the responsibility for the investigation of Illinois soils also bought interests with the

same purpose. This was a full two years after the experiment station had begun preaching the necessity of adding phosphates to the grain-worn soil of Illinois; but there was nevertheless a danger of misconstruction of the faculty's motives in continuing to urge the buying of the fertilizer. After discussing the matter with President and Trustees, the men involved severed their connection with the company.

If the University had insisted with scant notice thirty years ago that it was "the State University," if under Draper it had made a sturdy attempt to realize this assertion, in the last decade it has taken its place with entire self-confidence as a great agency in State life. The full scope of its extension activities will be noticed later. But the chief events in its progress in State service are to be recorded here. The agricultural departments have led the way. In 1907 the experiment station completed its first general survey of Illinois soils, and published the results. Detailed soil study was then undertaken, and has now covered half the counties of the State; and the acquisition of experimental plots all over the State, which had begun under Draper, went on rapidly. Three years later the college of agriculture began to give instruction at a boys' agricultural school conducted by the State Superintendent of Public Instruction at the State Fair at Springfield each autumn, over 200 registrants being admitted according to county allotment. The Farmer's Hall of Fame, instituted with the annual hanging of portraits of figures prominent in the State's agricultural history in the Auditorium by an agricultural committee, had then just been opened. At about the same time the University began holding agricultural extension schools in different localities, there being forty of from one to six weeks' duration

in 1915. Lecture trains carrying demonstration material have by courtesy of the railways traversed much of the State. The bulletins of the experiment station were supplemented about 1910 by a University press service, which began the distribution of many columns of agricultural matter weekly to press syndicates and to agricultural papers. In 1914 the college, in conjunction with the courses in business, supplied to the State the services of Dr. R. E. Hieronymus as community advisor, his function being to make a study of various localities, assisting in the solution of their business and socal problems, to try to create a better relationship between town and country, and to bring business interests in the cities into closer touch with the University. When it is remembered that in 1913 the college reported that its representatives had delivered at least a thousand lectures at six hundred Farmers' Institutes and other gatherings, and that the station bulletins reached hundreds of thousands of readers, it is evident that the agricultural departments reach the life of every rural community.

In its new Woman's Building the household science department has been able to do much on similar lines. It early began to send about over the State movable schools of one and two instructors in household arts—eighteen in 1908. In 1909 began the annual sessions of the school for housekeepers, held at the same time as the other short courses. At the same time the department developed a considerable usefulness in answering inquiries on food preparation, the care of children, and so on. Five years later the college and the domestic science department began together to assist in directing the extension activities made possible by the Smith-Lever act of Congress.

Practically all the extension work in engineering dates from the second year of the administration, when the experiment station was reorganized and received its first direct grant of $10,000. In 1910 the college advertised its acquisition of a drop testing machine and brake shoe testing machine for free use by the railways. A year later liberal provision was made for the Miners' and Mechanics' Institutes, to promote the technical efficiency of mine managers and workers by bulletins, lectures, correspondence work, and extension classes. But in this college extension work has never been prominent. In science the State Geological Survey was authorized by the Legislature the same year that Dr. James came, under a director who had made a specialty of economic geology, and who, in coöperation with the chemistry and ceramics faculties, soon after began to study the value of Illinois clays for bricks, tile, and pottery. The usefulness of the Water Survey was greatly extended by the passage of a bill authorizing the appointment of field agents to visit watersheds and municipal reservoirs. As for the college of liberal arts, the economics, history, and political science faculties have all found means of serving the State, while in 1915 the courses in business offered a short session "designed to meet the needs of both employer and employee," with instruction in a dozen business fields. The education department now has two officers inspecting high schools, of which not far from 500 have been fully or partially accredited, and in other ways is directly serving the people.

The summer school may be regarded as virtually an extension department, for the majority who attend are high school teachers. Dean Clark, the director, reported in 1906 that more than three-fourths the regis-

trants had at some time taught. By that year over 500 had entered, and there was no longer any doubt of the sound policy of offering vacation instruction. Free scholarships were thereafter given all public school teachers of the State who could qualify—a step at once rewarded by the attendance of a considerable group from Chicago. The sessions developed slowly. After Prof. W. C. Bagley became director in 1910, the increase in the number of graduate students was the most notable fact; for he urged high school teachers to strive towards a master's degree—which they could earn in four sessions—in the departments related to pedagogy. There came also to be a notable degree of student life at these sessions. By 1911 we find the fourth volume of a triweekly *Summer Illini* published; and we find recorded in its pages the activities of summer dancing clubs, a dramatic club, a literary society, a chorus, with regular "sings," and a baseball team which engaged neighboring towns. The faculty did their best to make the hot and lonely lot of the students enjoyable, and in addition to lectures there was a series of receptions. The registration had by 1914 approached 1,000, and by 1916 exceeded 1,100.

Indirectly connected with the greater prestige of the University and fuller State recognition was the growth of its alumni activities. The outstanding factor in stimulating this growth was the founding in 1907 of the *Alumni Quarterly,* under the editorship of Frank W. Scott of the English department. At this time there were but fourteen alumni associations, of which some were apparently dead and none with much vitality. By 1911 there were thirty, all vigorously alive, and each of the three or four largest with more strength than the whole had possessed before. In that year an alumni associa-

tion embracing the whole country was proposed, and the next one saw the adoption of a new alumni constitution, under which the various associations are supposed to work with some coöperation. In the same year the Illini Club of Chicago opened its first quarters on a floor leased in a downtown building. The first annual home-coming of alumni was held in 1910, coincident with the chief football game of the season, and was at once a success. There are now nearly fifty alumni clubs, including three abroad—in India, Brazil, and Japan. The first edition of the *Alumni Record* was published in 1906 and the second in 1913, while a University of Illinois Directory was published in 1916, containing the name of every person ever in any way connected with the Urbana departments. These publications and the *Quarterly,* which with three thousand subscribers is now the *Alumni Quarterly and Fortnightly Notes,* genuinely stimulated the interest of old matriculants in the institution. The alumni undertook for the first time the raising of funds for a University building when in 1914 Dr. Burrill initiated through the various clubs his campaign for the Gregory Memorial. Within two years about $40,000 had been subscribed. Another pledge of alumni interest in University affairs lies in the consistency of their representation on the Board of Trustees, two having been elected in 1914.

The chief characteristic of undergraduate life under Draper, as we have seen, was its growth from the qualities of small college life to those of a university. But for university life it was still immature and struggling, with institutions embodying high ideals and those of no such merit existing side by side. Year by year it was to lose its crudenesses, and to see its more unworthy

customs and methods supplanted by those registering an improvement in intellectual standards and manners. The same process was taking place the country over, but at Illinois the change had to be pronounced. The institution which grew from hundreds to thousands of students in a few years, without controlling student traditions or customs, was likely to be the prey of sophomoric ideals. Yet it must be appreciated that the earnestness of the Illinois student, his practical sense, have always protected him from many of the serious follies fairly frequent elsewhere.

In one field the practice of Illinois students was always sound. The opening of the administration was coincident with the adoption of the graduate coaching system, demanded on the ground of its evident sportsmanship and of the failure of the old system. In 1901 and 1902 Coach Edgar Holt of Princeton proved unsatisfactory, and in 1903 Coach George Woodruff, who had been very successful at Carlisle, led the football team through one of the most disastrous years in its history, though he had good material. "Illinois men can't do any worse and perhaps they'll do better," was the cry; and the Board of Athletic Control made Arthur Hall head football coach, to be assisted by Lowenthal, Lindgren, and Mathews. The first season was a thorough success, even the sempiternal rival Chicago being tied 6 to 6. The next two were lamentable. Thenceforth there was a series of years in which victory alternated with defeat, but in which even the triumph over Chicago in 1910 did not convince the students that the best possible showing was being made—now Hall, now Lindgren, now Lowenthal chief coach. At last, in 1912, the abandonment of the graduate system was decided upon, and Robert Zuppke, who had attracted wide attention

by his successes with a high school team in Cook County, was brought to the University the next year. The wisdom of the selection was proved by a record of two seasons after 1913 without a defeat. A pronounced element in the increasing strength of the team, however, is the new wealth of football material, especially in colleges other than engineering, where the class work had always required such close application as to prevent many students from training for it; another is the revision of football rules to favor open tactics and light players. But the long experiment with graduate coaches was creditable to University spirit, and never in the darkest days were unfair playing methods used.

In baseball the University has steadily led the West, and in track has always occupied a position better than the average. Coach Huff remained in charge of the nine, as well as athletic director, from the beginning of the administration. In 1907 the undergraduates were frightened by his departure to manage the Boston American team, but he was induced to return. A repetition of the spectacular Eastern raid was prevented by conference rules, but in 1912 the team won every game played. The track team grew perceptibly stronger as the years went by, and in 1907, 1909, 1913, and 1914 won the outdoor conference meets of the West. It has been better on the outdoor than the indoor tracks, and has won its place rather by general excellence than by the production of stars. The first basketball was played in 1906, and the team now has its own coach.

One of the best measures of the growing vigor of student life was the rapid increase in student organizations, which in large part represented the natural striving towards student democracy. Not merely literary and professional bodies, but State clubs, county clubs,

foreigners' clubs, motorcycle clubs, chess clubs, semi-religious clubs, clubs of all sorts and conditions, were organized. In 1909 the *Illini* conservatively estimated that fifty per cent. of the students took an active part in one or many organizations. There were then 23 fraternities and 8 sororities, 11 honorary fraternities, and 6 literary societies, while the remaining organizations made up a list of 125. Six years later this number had certainly increased to 150, and there were few students who did not meet some group of fellows regularly. The number of social fraternities alone in that year was 30 and of sororities 11, with a score of honorary Greek letter bodies. The growth of the latter list marks the rise of standards and the growth of registration over a wide curriculum. A chapter of Tau Beta Pi was established in 1897, one of Sigma Xi in 1903, and one of Phi Beta Kappa in 1907, with many honorary fraternities of less importance at intervening and later dates.

Certain prominent undergraduate organizations have a history of their own; and chief among these is the Illinois Union, founded in 1909 on the model of similar organizations at many older universities. In Dr. James's first talk to the students in 1904 he called attention to the desirability of an organization like the Harvard Union, and this suggestion he repeated on various occasions. In 1909 Prof. L. P. Breckinridge told the Juniors at a smoker that they should make an effort to obtain a smoking and rest room in a University building, and this idea was broadened by conferences with the faculty until it approximated the President's. By June of that year the Union had been organized, had enrolled 2,000 men, and had been offered $1,000 by the President towards a building. It at once took charge of a large

number of student affairs, from the class contest to student dramatics. In 1911 it presented the first student opera, an indescribably sorry affair that was yet somehow a success, while before this it had attempted a banquet for all its members. Campaigns for funds were conducted energetically among students and alumni, many seniors in several classes pledging $25. Finally, in 1913 a solid Union investment became a reality, the officers purchasing a small business block on Wright Street near the old Co-op. The Trustees had informally promised a site on the campus, but not for any building to cost less than $150,000, and the present arrangement is temporary.

The Senior societies also deserve a word, for they were among the most influential bodies on the campus. The first, Shield and Trident, had been founded in 1893, and had run its course alone till the foundation of Phœnix in 1906. The rivalry between the two was healthy, for while the older body was controlled largely by a select group of fraternities, and interested in the prevalent spoils system, Phœnix was democratic and developed reformatory tendencies. Both not only arranged smokers, supervised many student activities, and represented the undergraduates in dealing with the faculty, but were supposed to number the most admirable men in the University. Yet in both standards of membership came to need revision, and in 1911 two members were dropped for dishonesty in examinations, and one for poor scholarship, while others had records nearly as bad. Both societies were really becoming the butt of serious students, and the faculty therefore abolished them and substituted a single organization known as Mawanda, election to which was from a list approved by the faculty. The change was linked with other re-

forms by the disciplinary authorities, among them the abolition of Yoxan, an interfraternity body of students, which had originated when saloons were still kept in the Twin Cities, and had maintained its drinking traditions.

The most unpleasant feature of student life during the early part of the administration was the unhealthy atmosphere of undergraduate politics. For the presidencies of the classes and the athletic association, and the editorial and managerial positions on student periodicals, there was a rivalry among certain college elements which dealt in illicit combinations and tricks, and that had for its goal personal advancement alone. In the miniature college world there was something amusing in the rise of these petty Quays and Crokers, but there was also something damaging to student character. So total was early faculty indifference that in 1907 a student wrote that "no class has yet made a regulation in its constitution or otherwise stating accurately what shall be the remuneration of the managers of the *Illio,* or what shall be the disposition of the profits of the Cotillion, or Prom, or Senior Ball, or how possible deficits . . . shall be met." There were never any marked scandals in the student misappropriation of funds, but there were many veiled accusations of such misappropriation. In 1907 the Council appointed a committee to audit the accounts of student bodies, but its work was long feeble. Class hat and cap committees were often accused of pocketing profits that were not theirs, and it is certain that local merchants tried to bribe the members to grant contracts, and sometimes succeeded. The editors and managers of the *Illini* and *Illio* split the profits of these publications with little regard for the assistants who labored with

them, and these profits rose to $1,000 per man. One *Illio* editor paid the manager a small round sum for his share, did all the work alone, pocketed all the profits, and added to his gains the commission on the contract for the next year's book, which he persuaded the incoming editor to let to a firm he represented. The large dances, especially the Senior Ball, often resulted in a division of minor spoils by the dance committee. There was but one remedy, and it came when the faculty took over a share in the direction of student activities, and made its auditing committee a stern reality.

Some efforts at reform the students did themselves originate. There came to be a well-defined undercurrent of opposition to the "plunderbund," and the mere whisper that a candidate belonged to an unsavory secret fraternity was enough to injure him. Repeatedly it assisted students to office that they were known to be irreproachably honest. Yet the students lacked the administrative foresight to erect a permanent barrier against the old methods. The *Illini* and *Illio*, for example, were used for ten years like cows, to be passed from milker to milker and regularly exhausted, when they might have been put on a continuing basis, returning a percentage of profits year by year for equipment and handing down a tradition of splendid service. In 1911-12 the faculty reformation began by the reorganization of the *Illini*. It was not unsatisfactory as a newspaper, for it had become a daily of forty sixteen-inch columns, but it was felt that it could be bettered, could be earning money for its own press, and could have a closer connection with the journalistic courses. An *Illini* corporation was formed under six trustees, three faculty members, three students, who appointed the editor, manager, and bookkeeper, and controlled the

general policy. The new system was heralded by the *Illini* in an issue with black-ruled pages, but it worked well, and a little later both the *Illio* and the *Illinois Magazine* were brought under the same plan. At about the same time (1911) student organizations were forbidden to solicit funds from local business men, and in 1912 an effective auditing committee was created, with the provision that its consent was necessary to contracts involving over $150. As for the managerships of athletic teams, they had never offered a field for the student dishonest in handling money, but they had often given inefficient but "popular" students an office, and they were now put upon a merit basis, apprentices to them being tested yearly.

Thus was ended a very discreditable state of affairs. In 1913, wrote Dean Clark, "the cap and gown committee for the last few years . . . has had little real purpose except to get its gown free. . . . The Sophomore smoker committee of the class of 1911 . . . left its bills until forced by the University authorities to pay them; and yet the members, by their own confession, profited cigars and cigarettes to the extent of some fifty dollars." Matters had gone so far that members of an unprofitable students' opera were peevish that they were not given a banquet out of the deficit, and that religious workers were heard to complain of the lack of remuneration! But the grosser abuses were now forever impossible.

Yet it must not be supposed that the general student life was not at this time sound. The majority of student activities showed sincerity and increasing intellectual effort. The magazine in 1912 was distributing from five to eight hundred well-edited copies monthly. Debating and oratory had been sustained with as much success as

at other mid-Western universities. In 1907 was formed a pentangular debating circuit, and this, with the debating league already existing, gave University teams rivals on all sides. The Northern Oratorical League and the Intercollegiate Peace Association offered scope for student orators, while minor contests within the University were retained. The literary societies not only held their own, but increased in number. As for the technical periodicals, the *Technograph* became in 1911 a quarterly, and the *Illinois Agriculturist* not only prospered but achieved a State-wide circulation. In 1911, finally, the University's first distinctly humorous publication, the *Siren,* had its sturdy birth.

The interest in dramatics was of an especially praiseworthy character, and there is not space here to enumerate even the prominent performances of a list long enough to atone, in part, for the distance of the University from the metropolitan stage. In 1911, as Mr. T. H. Guild, the patron and guide of the drama, recalled, a senior had had an opportunity to see given by Mask and Bauble, by the literary societies, by the faculty Players' Club, or by the class in dramatic reading, "David Garrick," "Nephew or Uncle," "The Cricket on the Hearth," "The Palace of Truth," "Esmeralda," "The Rivals," "The Honeymoon," "Our Boys," "The Taming of the Shrew," "'Op o' Me Thumb," "St. Patrick's Day," "Two Strikes," by Mr. Guild himself, "The Two Noble Kinsmen"—the first revival of Shakespeare's and Fletcher's play in over a century, ambitiously given, and others. A graduate student might have remembered the English Club's revival in 1904 of Greene's "Frier Bacon and Frier Bungay," so successful that it was repeated at the installation of President James, and the revival by a literary society of Shirley's

"The Opportunity," with a number of other serious dramas. After 1911 there was a distinct increase in dramatic activity, and scarcely a year has gone by without a half dozen student or faculty plays—two or three of the former by the students themselves. The range has been from Shakespeare to Synge, Ade, and Galsworthy. In 1913 a branch of the Drama League, which has assisted in bringing good plays from the nearest cities, was founded at the University.

Save for the annual May Festival, abolished in 1911, the students in the early part of James's administration had scant opportunity to hear good music. The Star Lecture Course occasionally brought a good musician, or the music school arranged a recital. The Festival was done away with on the understanding that a series of concerts was to be substituted, and the President at once called the Trustees' attention (1912) to the opportunity to assist. "The University," he said, "has not given as much attention as it should to the cultivation of the æsthetic tastes of the student body; . . . there is a notable lack of opportunities to see and hear productions of merit in music and drama, painting and statuary," and he urged it to greater attempts to interest students in these things. The music school agreeing to help, an appropriation was made for a series of concerts, upon which $5,000 was expended; the result was so satisfactory that the experiment has been repeated yearly.

Left to their own devices for much amusement, it was natural that the students should originate many entertainments of their own. Thus in 1907 two were born at once—the electrical show and the Interscholastic circus. The first was the result of months of preparation, and was both spectacular and educational, guides

being provided. It was attended by many electrical engineers, and the *Electrical World* remarked that "the combination of exhibits of scientific interest with exhibits to catch the popular fancy, and the means used to advertise the show, prove the assertion we have often made—that the technically trained man is equal to almost any emergency." The circus, a happy idea of the athletic authorities, brought in over $1,000 at the first performance. The same craving for amusement was evinced in the readiness with which the women developed the Maypole dance, introduced by Mrs. Jeannette C. Lincoln, which by 1907 was attracting nearly 10,000 people. Finally, the post-exam jubilee, originated a few months after Dr. James's coming, and the "girls' stunt-show" which followed it, each a series of skits on contemporary topics, were institutions such as would hardly have been born at a college in or near a large center.

For bettering the tone of student life nothing was more important than the work of the Christian Associations, both of which realized before the end of the first decade of the administration their long hopes for homes. The year it opened, the Y. M. C. A., which had already bought the site it now holds, sold its lots east of the Engineering Building for $15,000. In the spring of 1906 a building committee reported that practically $100,000 would be required for a substantial, roomy building, and that of this $65,000 remained to be raised. Congressman W. B. McKinley headed the subscription list with $15,000 for a building and $20,000 for an endowment, and the remainder was soon obtained. By 1908 the building, which contained dormitory room for over eighty men, a library, lounging rooms, bowling alleys, restaurant, and so on, was finished. It and its



FRONT OF WOMAN'S BUILDING

site represented an investment of $107,000, and it has been almost invaluable to the student body. Meanwhile the Y. W. C. A. had occupied across the street the home formerly used by the two Associations, worth perhaps one-fifth as much. Early in 1911, having received $20,000 as a gift from Congressman McKinley, and $15,000 as a loan, it also set out to raise money for a permanent building, and obtained a total of $50,000, with which a structure bearing a tablet in honor of Congressman McKinley's mother was erected. Mr. McKinley ultimately canceled the loan and paid to the Association the total amount exclusive of his gifts which the building cost, thus making the whole structure a memorial to Hannah McKinley. Both associations are constantly active in ways religious, social, and charitable, and their membership in 1914-15 approached 1,500.

The work of the various churches for the students, now a feature of life at Illinois almost unique, was in its beginnings when Dr. James came, but quickly assumed great proportions. The lead was taken by a denomination which did not enroll a great number of students—the Episcopalian. In 1904 it opened a house which afforded room for a few students, with much success; and early in 1909, as a result of efforts by Edward Osborne, Bishop of Springfield, ground was broken for a residence hall, completed that summer, for over thirty girls. The Presbyterian church had begun its activities among the students only a year later than the Episcopalian, and in 1909 these flowered into the purchase of a house to serve as a men's dormitory. Two years later Congressman McKinley gave $30,000 to be used, with other funds already raised, in erecting a students' Presbyterian church in honor of

his father, and the dormitory was moved to the rear of this and converted into a girls' residence hall. For the endowment of the church over $60,000 was raised by State-wide collections. Meanwhile other denominations were bestirring themselves: the Congregationalists had by 1910 purchased a house and lot and were planning to erect a church, the Unitarians at the same time built a small church and laid emphasis upon student meetings of an intellectual character, and the Lutheran and Christian churches employed student pastors.

Following 1910, more advanced steps were taken by some churches, in which the Methodists and Baptists led. The latter approved (1910) plans for a large structure to be at once church, student center, and parsonage, at which regular courses might be conducted in Bible study, church history, and so on. The Methodist church nearest the University had meanwhile enlisted the support of the general Methodist body in the State in organizing the Wesleyan Foundation of the University, under a board of trustees headed by Bishop McDowell of Chicago. Its plans call for the expenditure of over a half million on a group of buildings which shall be virtually a theological seminary as well as a social center and a church, to be supported by an endowment of as least as much more. Resident lecturers shall be employed here to offer instruction in theological subjects, and semi-theological subjects of general appeal. It is proposed to make this of such grade that it may be accepted by the University for partial credit towards a degree. All this religious work, involving appeals to almost every congregation in every city and hamlet in Illinois, has naturally assisted the University's prestige, and dissipated the last of the feeling that it was an irreligious place.

The improvement of living conditions among women has been steady, and has received a great impetus in the construction of the first residence hall. The very increase in their numbers was a powerful factor in making their lot happier, for their special activities enlarged, and they were enabled to build up a richer world of extra-curricular activities. The Woman's Building brought with it parlors and rest rooms as well as offices and gymnasium, and has been the center of the work and play of the women ever since. With the assistance of the sororities and church dormitories, the proportion of women in boarding houses has been kept from growing too great, while the dean of women—Mrs. A. H. Daniels, Miss Lily G. Kollock, Mrs. Mary Fawcett, Miss Martha J. Kyle, and Miss Fanny C. Gates have successively served as dean or acting dean since Miss Jayne resigned in 1904—has exercised a constant supervision. Finally, there has been a notable increase in the number of faculty women, and this has sensibly improved the atmosphere.

VII

ADMINISTRATION AND HOUSING OF THE UNIVERSITY

The Constitution and the Budget. Research Work. Faculty Life and Faculty Personalities. The University Buildings. Campus Plan and the Twin City Environment. Equipment. The University's Physical Future.

THE organization of the University is nearly as much the result of a slow process of growth as its buildings, equipment, or curriculum. It was never a thing taken ready-made from other institutions. Ideas, to be sure, were often borrowed. But they had always to be adapted to the peculiar conditions of the University, to the personalities of those directing it, to the rapid changes wrought by its development; and since 1890 some distinct innovations are traceable in State University practice to Illinois.

The Board of Trustees and the Presidency are the two parts of the administration that have most prominently altered, and they have altered throughout all its history. At the organization of the University, as we have seen, there were thirty-two Board members, including the Regent, who was its president. Operations under this system did not satisfy the public, for the large Board delegated more and more power to the Regent, till it was almost unlimited. Within a few years the Legislature reduced the membership to eleven and deprived the Regent of his place. We have noted

that under Dr. Peabody came the change by which the Board was made popularly elective. This abolished an "internalism" by which the Regent, controlling appointments to the Board, also controlled University policies, and it made the people more willing to support the University because they were in more direct and unrestricted control. But this new independence of the Board brought about a new vexation in its frequent trespassing upon the proper functions of the executive, and made necessary a sharper delimitation of its field and powers. Theretofore the difficulty had often been in getting the Trustees to make a stand of their own; even the rugged Alexander McLean, a business man of Scotch birth whose chapel talks were the delight of early students, had subserviently followed the Regent. Thereafter the difficulty was in preventing undue Board interference. In 1898, therefore, Draper wrung from the Board a comprehensive statement of his executive freedom.

The need for a free hand Draper thought especially great "in an institution which is in its earlier years and rapidly growing; where the Trustees change all too frequently and practices are yet to be coördinated." This regard for his functions continued, and in 1903 he complained of the Board's requirement that such reports as were made by the deans to the President should be sent to it in advance of its sessions. This tended to lessen the respect for the office of the President, and to change the character of the reports. The deans tended (he thought) to speak of reports to the Trustees when they were expected to report to none but the President, and to introduce recommendations concerning matters in which they had no responsible authority. Through the Trustees to whom the reports were sent,

information concerning University policies sometimes leaked out prematurely. It was therefore decided that the President should send only such papers and reports to the Trustees as in his judgment would be of aid to them. President James has repeatedly shown the same jealousy of his office, and it has not been encroached upon. Indeed, in the last decade the Trustees have not only allowed the President due executive latitude, but have deferred to him more and more in legislative policy. Each Trustee generally feels himself interested in some phase of the University's work, while there are a number of special committees. But the men and women are usually unable to give detailed attention to the state of the University as a whole, or to grasp all sides of a problem affecting it in its entirety; there is naturally a growing tendency to accept the expert judgment of the President. This is true even when it is opposed within the University. Thus several years ago the college of engineering wished to have $50,000 more given it than the budget approved by the President allowed. Dr. James asked Dean Goss to speak before the Trustees in defense of his position, which he and several departmental heads did; the Board was much impressed, and two members spoke seconding Dean Goss's stand; yet the Trustees finally followed the President.

The Trustees theoretically meet four times a year, but in practice nearly a score of sessions are required. As the meetings seldom require less than two days' time, the total is a severe tax upon the unpaid members. Less and less attempt is made to transact business in committee, for this is found often to mean simply a duplication of work. The Trustees are the only State officers who, since the passage of the direct primary

law, are nominated at the regular party conventions—this because the expense of putting a name on the primary ticket is heavy. The result is that more emphasis than formerly is thrown upon the nominations. For over twenty years the alumni have taken an effective interest in the choice of the nominees, and have usually had a hand in drawing up the party slate, though this has to be managed cautiously, for the State is jealous of the public nature of the office, and frowns upon any move towards internal control. Politics has played virtually no part in the proceedings of the Board; on the other hand, sectional affiliations and various economic or financial interests have sometimes played a disagreeable part. Thus one member once tried to obtain special privileges in the granting of contracts to the district in which the University is located, and had to be checked. The members have usually been very fit, and though nominations may be careless, none is ever willfully bad. This fact represents the State's good sense and idealism, for it will brook no meddling with public educational institutions. The asylums and charitable interests have sometimes been the football of partisan interests; the normal schools, very seldom; and the State University, never. Certain of the Trustees have assumed an important part in the development and growth of the University, serving it with a generous expenditure of energy and time; most prominent among these are S. A. Bullard, who served continuously from 1889 to 1907, and was twice president of the Board, and W. L. Abbott, another alumnus, who has served since 1905 and been president much of that time.

A President solicitous of his own independence will grasp the necessity for the comparative independence of deans and departmental heads in their own fields; and

since 1890 there has been no complaint on this score at Illinois. Dean Davenport once justly attributed the ease with which his college shouldered the burdens which it was predicted would break it down to this administrative liberalism. The machinery never even creaked, though the experiment station alone had to take up a bulletin service soon amounting to the distribution of 35,000 copies of each publication, and a correspondence that mounted to over 10,000 letters yearly. As he said of his departmental heads:

> I could point out to you one of these men who is responsible for the profitable use of over $50,000 every year, spent in his department alone in amounts of from five cents up; and to another whose researches bring him into close relations with the most extensive dealers and the largest business interests. The least amount for which any of the heads is responsible is $25,000 a year. Think of issuing orders to that kind of men! What would be their mind if, upon returning to the University after a conference with leading citizens upon matters involving thousands and perhaps millions of dollars when measured by public utility, or upon policies extending over generations, they should pick up and read specific directions concerning a ten-dollar detail?

There has never been any attempt to force the faculty to another course in the name of administrative solidarity. When President James first came he determined to unite the two liberal arts colleges, but as opposition developed in one which felt that its interests might be neglected, he waited years till its faculty was converted. In the departments each man knows his responsibilities. He knows how much money he can have for the year; as he helped make the division, he understands why it is that sum. All plans, estimates, and lists of appoint-

ments and reappointments of course pass under the President's hand; but he never forces an unwelcome appointment on a department.

For one thing, this administrative flexibility is necessary to give the President the leisure for representing the University before the public that his position as State officer requires. Gregory was inclined to travel widely and to speak before any available audience, from a rural gathering to a national convention of educators. Peabody spoke little, but Draper very much. Dr. James has also keenly appreciated the value of the speechmaking that can be done at professional and trade gatherings, banquets, and civic conventions, especially within Illinois. It gives the President, too, the proper freedom for blocking out new policies and examining them in all their bearings. Even if he never left the campus the President would always be in danger of being overburdened with this labor of administrative planning and consultation; and at a State university he must be away from the campus much of the time. Finally, it is necessary in order also to allow the heads of many departments scope for unimpeded service to the State.

The making of the University budget is a difficult and protracted process. During the winter of every second year there has to be prepared, in collaboration with State officers, an estimate of the receipts from the mill tax for the biennium, and a bill appropriating this much in a number of round sums for general purposes, of which instructional work and the erection of buildings are the two chief. If the tax does not produce the estimated amount, the budget has to be confined to that sum. The work of preparing this appropriation bill falls to the President, in consultation with the deans;

and after it is passed and the proceeds of the tax are actually available, the final touches must be given the detailed budget which has been meanwhile in process of formation. In large part this second budget is planned, not for the biennium, but for the year. Early in the winter the departments are busied with their estimates for equipment, salaries, expansion, and so on, while the deans and departmental heads most closely affected are called into consultation upon the new buildings, the new purchases of land, and general expenses of maintenance. Each dean keeps track of his college's expenses. The estimates by the departmental heads are gone over by the deans, and the deans and President, with such professors as are necessary, make out the final document. A virtual committee on estimate and apportionment is thus formed of a part of the Senate; and by the July meeting of the Board it has submitted its document to the Trustees and had it approved. Much routine work in budget-making naturally goes on throughout the year. The comptroller makes a monthly financial report to the president of the Board, quarterly reports to Board and Governor, annual reports on Federal funds to the Interior and Agricultural Departments, and a biennial report for general use.

As bodies for the unification of the several colleges, the Council of Administration and the Senate have served their purpose well. The union of the faculties is not so close as in an institution like Columbia, where men in the governing body of one college sit in another, and slight friction between different colleges has not been unknown. Frontiers will always be strongly marked. But Senate committees completely cutting across college lines are frequently appointed; while the graduate school is governed by fourteen professors

representing all the colleges except law. The Council, which meets once a week, advises the President and exercises general disciplinary functions—the deans sitting on it passing on all general matters of student control. It has also a limited amount of ad interim legislative power. Legislation, however, is supposed to belong to the Senate of full professors and departmental chiefs, which meets about once a month to pass upon all matters of educational policy. Much of its business is that which comes up to it from the various college faculties, and is thus threshed out twice. Some believe it, however, both too unwieldy and too heterogeneous a body for the proper discussion of many matters of academic administration, for the representatives of the technical faculties often feel incompetent to pass upon questions directly affecting the liberal arts or law colleges or professional schools alone, and the representatives of the other colleges and schools similarly feel estopped from discussing points of technical education. It is possible that the faculty of the college of liberal arts and sciences will come to take the central place in the discussion of questions of policy involving general pedagogical considerations, as Harvard College, for example, does in Harvard University. But growth in this direction will probably be slow. Illinois takes her government seriously, as the time spent by the Senate committee on a new constitution, which reported its instrument for approval in 1915, showed. Laboring under Prof. Ward two years, it produced an instrument containing more proposals of a radical and yet very thoughtful nature than a casual reading would suggest.

The various State agencies at the University are variously controlled. The State Entomologist's Office is

under the direction of the State Entomologist alone; the State Laboratory of Natural History is controlled in part by the Trustees, but receives its funds direct from the Legislature; the State Water Survey is a division of the chemistry department; the State Geological Survey is under a commission, of which the President is an ex-officio member; and the Miners' and Mechanics' Institute has always been controlled by the Trustees. The Chicago colleges are answerable to the Trustees and President, and their old divorce from those at Urbana is being steadily bridged over.

Within the colleges, the departments are sometimes one-man divisions to a regrettable extent. Some have heads, and some of those with enough members of professorial rank have the less autocratic chairman. Often, it is true, even the head shares his responsibilities with others, as in chemistry Dr. Noyes is ably assisted by Prof. Parr and others, and in some engineering courses, covering large fields, there is a certain division of responsibility. But the University has seen many instances in which one man has been the life of his group. The result is unfortunate in that this man, sometimes of fine ability as teacher or investigator, is often submerged beneath the burden of routine administration; and in that when he leaves the University his department is sadly crippled for months or years. But as the University expands this condition is being remedied.

Research work at Illinois has been much stimulated by the fact that there exist two departments wholly devoted to it—the agricultural and engineering experiment stations. The work of the State offices on geology, natural history, and entomology also liberally provides

for much original investigation. No student with a bent for inquiry into certain technical or scientific fields could go to a better place, though thus far the benefits of the two stations have been rather to faculty than to postgraduates. The staffs are largely made up of regular faculty members, and men who might never have thought of advanced investigation have produced striking results in experiments on machinery, fuels, building materials, soils, and in genetics. The great majority of the bulletins are of faculty authorship. The effect of the stations on the liberal arts colleges has been traceable. They gave the spirit of research there a competitive vitality the moment the graduate school was fully established, and they gave it for a time a utilitarian direction. The University Studies abound in titles in the history and economic and social life of the West, and especially of Illinois.

But the tendency is to greater breadth in research. In 1909 the University began printing a list of the faculty publications of the year, and this has not only lengthened but grown in scope. In 1914-15 this list comprised thirty-three large octavo pages of titles of books and articles, of which only a fraction specifically concerned Illinois, many even of the agricultural publications having a wider application. The faculty also undertakes a greater variety of ventures in editing. Prof. Noyes is editor of the *Journal of the American Chemical Society;* Prof. Alvord of the *Mississippi Historical Review;* Prof. Bentley of the *Psychological Index;* Prof. Bagley was founder of the *Journal of Educational Psychology,* in the editing of which he continues to assist; Professors Goebel, H. S. V. Jones, and Flom edit the *Journal of English and Germanic Philology;* and Prof. Ward is editor of the *Journal of*

Parasitology; while the roster of assistant editorships is of course long. For the first thirty years of the University but one or two faculty members had any time for research; now even the most overworked departmental head is guaranteed some leisure. A half dozen of the standard treatises in engineering, as many more in agriculture, and works of reputation in sociology, political science, economics, pedagogy, and pure science have been brought out by University men in the last decade.

Faculty life in Urbana is quite free from the snobbish atmosphere that readers of Dorothy Canfield's stories might think characteristic of the academic settlement in a small-town environment. For the simple reason that they cannot have any fellowship except within the University, the upper faculty grades do not try to shut themselves off from the subordinate. There is no temptation, as in a large city, for deans or departmental heads to consort only with equals in rank, and fill up a limited acquaintance by friendship with a certain set of business, political, or social figures downtown. There is also little of the snobbery that dictates that young professors shall spend more than their salary justifies in a squirrel cage effort to seem richer than they are. The faculty spirit retains the Western democracy with which it was imbued under Gregory and Peabody, and newcomers must adapt themselves to it or suffer. The faculty ball games, the faculty dances, the informal faculty Greek or scientific reading circles, know no artificial lines. The only sneers are at men like the foreign professor who was reputed to exclude all men under the rank of assistant professor from his house lest his marriageable daughters take a fancy to

them! The faculties of the different colleges intermingle as much as at most institutions. The University Club, built in 1908, has been invaluable in affording a place where all faculty people can meet at frequent intervals in receptions, card parties, or dances; while for the faculty bachelors it offers a commons, and for a few, rooms. The membership fee is low, and the intellectual catholicism of the members has never permitted it to become a resort for cliques. The house is too small, however, to have its due influence. The faculty dramatic club has cut across college lines admirably, and the University remembers plays in which professors in agriculture, engineering, and liberal arts have said more to each other than they would say again in a semester. There are a greater number of formal faculty receptions than are common in a city—held at the Woman's Building or President's House—and the faculty has even developed a summer camp on the east shore of Lake Michigan where a considerable group spend their vacations.

The democracy, the good spirit, the unity of faculty life have undoubtedly been due in part to the fact that until a few years ago its chief traditions clustered about a half dozen figures whose service was to be reckoned in decades rather than in years, and whose personalities have been all that is ripe and sound. Death has made inroads upon the group, though four of its members—Ricker, Rolfe, Baker, and Forbes—remain. It was one of the University's pieces of good fortune that no less than six of its earliest servants, the three men first named and Burrill, Snyder, and Shattuck, should round out almost a half century in its service; while two more, Forbes and Pillsbury, who came in the later years, should remain in responsible positions till long after it

had gained its feet. These are the men whom the alumnus first remembers when he thinks of the University, and whose names occur first to the faculty member who has gone elsewhere from Illinois.

The chief of the molding faculty personalities was clearly that of Dr. Burrill, a teacher and investigator nearly as familiar to the graduate of 1914 as to that of 1874. Four times acting head of the institution, his name will always be connected with the three years during which it was lifted from a blind and painful lane to the road of real progress. The energy which he expended in behalf of the University was always remarkable. When he first came he "taught most of the day, was horticulturist to the experiment station, planted with his own hands or saw to the planting of most of the trees on the campus, . . . wrote reports, lectured here and there, served on innumerable committees, collected specimens up and down the State, and lest some remnant of his time should be unoccupied, was charged by the Board with the sale of a pair of mules." A scholar of distinction, with a pronounced gift for research, in the early eighties he had opened the path to fame in bacteriology and cryptogamic botany, with discoveries that the Germans denounced as frauds, but quickly accepted. He gave up his scientific ambitions for administrative tasks; and though he never repined, there was something pathetic in the eagerness with which in his old age, released from office, he turned again to the investigations with which he might once have made himself almost a Pasteur of the plant world. He was president of the American Microscopic Society and of the American Society of Bacteriology, and his collected scientific papers would make several volumes—

such a memorial to the writer as should some time be published. The Trustees would have been glad to elect him President had he not forbidden such a move as often as it was suggested; for his capacity for hard administrative labor was united with a certain retirement of disposition. Great gentleness made him loved to an extraordinary degree, and one of his colleagues once remarked: "Dr. Burrill, biologically speaking, you are a monster of goodness." His death in 1916 was the occasion of a remarkable tribute to his character and work.

Shattuck, a Yankee of long lineage, who had joined the Sixth Massachusetts Regiment at the outbreak of the Civil War and who was wounded at Cedar Creek, was for thirty-seven years head of the department of mathematics, and much else besides. At the beginning he also taught military tactics and civil engineering. He long did surveying for the University; and he was business manager and comptroller for many years, a difficult position, which he filled with shrewdness and tact. Above all, he was a teacher, and with a flavor of his own. He told Draper that he would retire from the University when he ceased to instruct in mathematics, and it was difficult for him to devote himself more and more to administration. The alumni as a whole must remember him chiefly for the vivacity and keenness with which he taught an exact science. Pillsbury, who was also a New Englander, a war-time graduate of Harvard, began his connection with the University in 1888 as secretary of the Agricultural Experiment Station, and in 1893 became registrar, he and Burrill shouldering many minor responsibilities for which Draper could find no time in the subsequent years of rapid growth. He was a man of rare sensitiveness and modesty, and rare attention to duty; and his unusual memory was

of great value to him in his office. Ricker entered the University at the age of twenty-six, and as a master workman, a fact which Dr. Gregory made the theme for a talk in chapel concerning the industrial significance of the University. He, too, was for thirty-seven years the head of a department—that of architecture, which he made the largest and one of the foremost in the country. For twenty-seven years he was dean of the college of engineering. But his unselfish labors for the University took many forms. He was architect of the Law Building, Natural History Building, the old Armory, the Machine Shop, and—with Prof. White—the Library; and this work was always undertaken to save the University the payment of architectural fees, and to enable him to see that the most value was received for the money expended. For example, the State appropriated only half enough for the old Armory, and to this the Trustees were able to add but little more from other sources. Ricker spent the summer in study of plans, and decided that the only way to obtain the building was to erect it under his personal direction, and chiefly with the men employed in the wood shop. By his patient direction it was completed without a deficit.

Professor Baker entered the University the year after Ricker—1871—and becoming a member of the faculty on graduation, was made head of the civil engineering department, a post he held till 1915; he has long been a leader in technical instruction, and was founder of the Society for the Promotion of Engineering Education. Prof. Forbes, who came in 1884, is a servant to whom the whole State owes a debt, but who has long occupied a peculiarly respected position at the University. He fought in the Civil War, as a mere boy taking part in

Grierson's raid; he was attracted to science, and became curator of the scientific museum at the State Normal University; and soon after he was instrumental in organizing the State Natural History Survey. Like Burrill, he had to give up many promising lines of research when he became dean of the college of science; but he still found time to prosecute the principal of his investigations, and since 1909, when he resigned as professor of zoölogy, he has devoted himself anew to tasks long ago planned. His writings on scientific subjects, contained chiefly in the publications of the two State offices which he has headed, are voluminous.

The alumni who cannot remember the kindly Prof. C. W. Rolfe, a graduate in the class of 1872, who returned to take charge of the department of geology in 1881, was responsible for much of its growth, and still teaches in it, and under whom instruction in ceramics had its beginnings, are rare. Prof. A. N. Talbot was one of five graduates in engineering in 1881, and after practical work in the West returned midway in Peabody's administration to become assistant professor of engineering and mathematics. He later established a laboratory for testing materials when the only other in the country was at the Massachusetts Institute of Technology, and this laboratory is now the best in the United States. His investigations have been carried far into several divisions of engineering, and he has become, in the words of a University which awarded him an honorary doctorate, "master of engineering in its relations to railway, hydraulic, and sanitary construction, eminent as a teacher of theoretical and applied mechanics, prolific and respected writer on these subjects." Prof. S. W. Parr, who was graduated three years later than Talbot, and has been much like him in his unostentatious work, is

also widely known outside the University, particularly for his long and laborious study of the utilization of coal and coal products. Donald McIntosh, a picturesque Scotch figure, rounded out thirty years of service following 1885 as head of the veterinary science department, and was the first to receive a regular retiring allowance from the University; and Prof. H. S. Grindley also will soon have worked for three decades, in chemistry.

A special word is due two men, both dead, of unusual influence upon general University life: Thacher H. Guild and Prof. Edward Snyder. The former probably accomplished more in his ten years (1904-14) in the English department to cultivate a taste for good music and drama among the students than had been done by all the faculty in thirty before. Prof. Snyder, the military commandant for some years, was professor of German or modern languages till failing health compelled him to leave in 1896 for California. His commanding physique, his sturdy character, and his generous kindliness gave him a rare hold on the students' hearts; in retirement he confessed that he had once wished to be a scholar, but that the sympathy needed by the many poor and struggling youths of the new University drew him irresistibly from secluded study. The student loan fund which, in old age and out of modest means, he instituted, is an inadequate memorial to a man who, in the words of one of the older deans, "was for many years by far the most vitalizing influence of the whole institution." He took a keen interest in everybody, and it was not necessary to be one of his students, hearing his appreciative "Full correct!" at a good recitation, to feel that he was one of the centers of University life.

The campus has undergone such a forced development in the last fifteen years that alumni of an earlier date

would scarcely recognize it. The first plan was published in the Trustees' report for 1872, and showed 623 acres; but no one then expected that any portion except that in the vicinity of University Hall would be used for building sites. The Board's refusal about 1870 to buy the lots which would almost have doubled Illinois Field, offered at $9,150, was due not only to lack of funds but to a conviction that the campus need not be large. It would have been fairly easy in the early decades to have converted the older portion from a narrow strip into a spacious square. Two men, however, showed unusual foresight in planning. Dr. Gregory insisted on locating University Hall "on the ridge south of Green Street" instead of upon Illinois Field, as proposed; and Dr. Burrill laid out the avenue southward which now bears his name, and planted it. It must be remembered that when the Hall was built many thought the dormitory on Illinois Field itself too far south, while the new buildings site was in the middle of a flat and wet prairie. The University till 1886 was without the strip on which the Natural History Building now stands, and till 1894 without that on which the Chemistry Laboratory and Agricultural Building are placed—the boundary of the campus running just east of the present Law Building.

After University Hall the erection of the old Chemistry Laboratory, now the Law Building, the Natural History Building, various small engineering structures, and Military Hall followed without any apparent plan in campus development beyond a lining up of the buildings along Green and Springfield Streets. But this primitive scheme was given real direction when the Engineering Hall, the President's House, and the Library were located in a manner changing the group

from a street façade to a partial quadrangle, and suggesting a similar area on the south campus. A new sense of the value of space entered into the location of the Agricultural Building, far enough south to be near the farms; and the Chemistry Building was placed between according to its due relation to the colleges of science and agriculture. The Woman's Building was located opposite to mark the other side of the quadrangle, at a point far enough south to afford outdoor playgrounds. Meanwhile, on the old arboretum site the college of engineering had been developing a useful but crowded and ill-designed group. With the erection of the Auditorium and the planning of Lincoln Hall, about 1910 it was plain that the two quadrangles would soon be completed; that the rapidly expanding departments would force the pace of building; and that the University must plan for a great and symmetrical expansion in some direction, preferably to the south. There were some who proposed the acquisition of a new campus alongside the old one, as at the University of Minnesota, then spending a half million for new land; and some who thought that larger buildings, more closely grouped in the existing area, to be supplemented by small plots to be acquired on each side the campus, would be the best solution of the problem. But against the first was the double objection of costliness and an overcrowding of the University district; against the second that of lack of spaciousness and architectural unity, and danger from fire.

In 1905 Mr. C. H. Blackall, in conference with Olmstead Brothers, had drawn a University plan which contemplated the grouping of the buildings around a central mall, to be made by the elimination of University Hall and the Law Building, thus leaving a clear

space between the Auditorium and some permanent building to be placed near the site of the President's House. South of the Auditorium should be placed three other quadrangles; north of the mall should lie two, forming the engineering group. The two sides of the mall would give room for over a dozen buildings. Several years later State Architect Zimmerman made a tentative plan which, like Blackall's, recognized the Auditorium as an axis, but which differed in breaking the mall by placing a building in its exact center, thus making of the middle of the campus two quadrangles instead of one. Finally, a University Commission was appointed, consisting of Messrs. Zimmerman, White, Blackall, and Burnham, which offered a plan more finished and acceptable than the previous ones, and which has been slowly matured in conception by Prof. White. An attempt has been made in it to allow for the expansion of all the colleges without widely separating allied interests, to achieve architectural unity, and to provide sufficient recreation areas to encourage exercise. In its present state, it provides, like Blackall's, for a central mall, though it sensibly allows room for but eight large buildings on its sides, these to be devoted to liberal arts and sciences. North of this is to lie the expanded engineering group, occupying nearly twenty buildings on a plot between Illinois Field and Green Street—this plot to be greatly widened throughout most of its breadth by purchases. South of the mall group is to come the greatest expansion. Flanking the Auditorium are to be placed the Smith Memorial Building and the Gregory Memorial Building, with the women's residence halls well to the east. On a line just to the south of this, already marked by the Armory, is to be placed a row of very large structures—the men's

dormitories, the gymnasium, the library, and the museum—while in front of the women's residence halls will lie playgrounds. Further still to the south will lie the great agricultural quadrangle, with the experimental plots on one side of it, and the large men's drill- and playground on the other. For the construction either of the agricultural or engineering groups some $3,000,000 will be required, and certain buildings in each are now urgently needed.

To the best of plans there are objections, but no doubt some modification of this one will be followed. The location of the new library and armory, the women's dormitory, art and music building, and Gregory Memorial has already been fixed according to its provisions. The great difficulty in providing for a symmetrical and careful plan of campus development is the constant shifting of the authority which has the location and construction of the buildings in charge. There is no opportunity to choose a Richardson, Root, or McKim to dominate the situation and lay down plans that will be followed even after his death. Yet much has been done in the last years to make the office of University architect one of greater authority, so that no matter how frequently a new State architect is appointed, some continuity of development may be obtained. During Mr. Zimmerman's eight years as State architect he designed all University buildings at his office in Chicago. Mr. Dibelka, appointed his successor by Gov. Dunne, permitted all except the Administration Building and addition to the Chemistry Building to be designed in Prof. J. M. White's office, ostensibly as a branch of his own—Prof. White being University architect. But the best solution would be the exemption of all University construction from Springfield's authority.

Serviceable as her buildings at Urbana are, of only half of them has Illinois any reason to be proud. Those constructed or under construction in 1914 represented a total investment of about $2,600,000, which by the close of 1915 had risen above $3,000,000; and this, owing to the low cost of building materials and labor, has given the University a much better group of structures than would be possible in or near a large city. Many of them are better than they were ever expected to be, for the greatest care was taken in expenditures for them. Yet parsimonious appropriations made erection by wings all too frequent till near the passage of the mill tax law, and a few buildings come near deserving the epithet applied to them by the *Alumni Quarterly*—"shanties." "Because it has been almost impossible to get enough from any one Assembly to build adequate structures," it said in 1911, "and quite impossible to secure appropriations for constructing a part of a building which might be completed later, we have on the campus the shabby gymnasium, the hydraulics and chemistry laboratories, and others; we have this year been given $200,000 for an engineering building and site, whereas $300,000 is the smallest sum at all adequate to the purpose; and $125,000 to house the school of commerce, a group of interests which ought to have at least $300,000." Happily, the list of substantial structures is being lengthened by the remodeling or replacing of the poorer ones.

University Hall is the center of the campus—to older alumni it is the University itself. Almost the only spot that has not altered, to every student it holds the chief associations of old friends and old times, of classes, clubs, and student affairs. It has largely been redeemed from its homeliness by the weathering of its bricks and the

growth of its ivy; and it is still solidly useful. The occasional talk of its demolition is quickly checked by remembrance that at the busiest hours over 2,000 students and instructors are found there, and that many of the classes would be homeless without its rooms. Its museums are gone, its libraries have been taken to safer quarters, most offices have sought the light and air of Lincoln Hall and the Commerce Building, most of the girls' literary societies are in the Woman's Building; but it is still the recitation center. Next to it, as general centers, stand Engineering Hall, the Natural History Building, and the Agricultural Building—each the focus of a half dozen busy departments. Not one resembles another, yet the general effect, particularly as each is embowered in trees, is pleasing. The first, with its four stories, heavy stone base, and substantial lines, contributes to the proper atmosphere of a technical group. The second was long thought to have the best-designed exterior of any building on the campus, and with its many gables is still one of the prettiest. The sweeping level lines of the third, and the beautiful entrance façade, harmonize with the wide stretch of lawn in the quadrangle before it; while it has been easy to add subsidiary structures at low cost.

All the most pretentious buildings except the Library date from later years—the Woman's Building, Lincoln Hall, and Physics Building. The Library is still the most distinguished piece of Romanesque architecture in the Mississippi Valley, and is in admirable relief to the boxlike outlines of University Hall at its elbow. Its tower of 132 feet is the highest point on the campus. The interior is as well designed as the exterior, for the delivery room, open to the roof, is lighted by a dome, and on the four sides are lunettes decorated



THE AUDITORIUM

with frescoes—one symbolic of engineering depicting the forging of a shaft, one of agriculture showing a harvest evening, and those representing science and literature with personifications of the arts and industries. In the rotunda is displayed an ox-yoke made by Lincoln. The Woman's Building, as completed by the huge new addition, is calculated to offend the artistic eye, but has the impressiveness of size. The Auditorium is a monumental building of commanding exterior, and with a beautifully proportioned and wide interior. In 1914 an organ costing $25,000 was installed, and at the same time steps were taken to overcome the echo which had always marred the building, and to decorate the walls. It was indeed an acoustic wonder. A watch ticking on the pulpit could be heard at the farthest corner of the balcony; a whisper on the stage returned distinctly after a journey of 225 feet; and speakers had their voices thrown back at them from every direction. The introduction of felt strips to absorb the sound cured this; the walls were decorated in ivory, and a semi-indirect lighting system installed. The Physics Building and Lincoln Hall have lines resembling each other, which are also roughly but clearly those of the Transportation, Ceramics, and Commerce and Vivarium Buildings, and which promise ultimately to give most newer structures a fair uniformity. But they differ in details and Lincoln Hall in especial has a highly ornate quality. The façade contains a series of ten terra cotta panels representing scenes in the life of Lincoln, from his rail-splitting days to the end of the Civil War. On the two wings are a series of inscriptions from the utterances of Lincoln, flanked by terra cotta portraits of twenty men associated with him in public life—twelve of them, Douglas, Trumbull, Grant, Yates, Turner, Logan, Oglesby, Love-

joy, Davis, Palmer, Koerner, Medill, from Illinois. There is an ornamental entrance, just within which is sunk in the marble floor a tablet bearing the Gettysburg Address. The Physics Building is distinguished by its extraordinarily substantial character, and is an excellent example of how high utility, with but slight attempts at decoration, can achieve attractiveness.

Of the remaining buildings, the steel and concrete Armory is notable as the largest structure of its sort at any university, and heaves its back so high over the trees that it is visible for miles across the prairie. The University brigade was bursting the old Armory, but it is easily engulfed in this one. The proposal of a dancing floor in it led one student wag to suggest chaperones with binoculars and motorcycles. The original portion of the Chemistry Building cost about $150,000, but the massive completion of its rectangular framework in 1915-16 brought the total well above a half-million. Four seminars are housed in it, a library, a museum, large lecture rooms and many recitation rooms, and individual desks for about 2,000 students, with adequate research laboratories. The Commerce and Administration Buildings, component parts of a larger Commerce Building to be completed soon, are plain but comfortable and solidly designed. The Ceramics Building is the nearest approach to an all-Illinois structure on the campus, its brick, terra cotta, concrete, and ornament all having come from Illinois soil. The intention was to use as many ceramic materials as possible, and orange, blue, and green panels and different shades of face brick have been effectively arranged. It also contains its own library and museum, with a large number of research and general laboratories. The Transportation Building near by is

a substantial three-story structure. Repeated efforts have been made to refurbish the Gymnasium, which uses the old Armory as annex, and with some success, though the building is a sorry one beside Chicago's or Northwestern's. On the northern part of the campus have lately gone up the Vivarium and the Education Building, the first on the campus arm gradually extending westward into Champaign, the second immediately to the east of Trinity Church. In the first, which cost over $75,000, are the best laboratories in the country for advanced experimental research in zoölogy and entomology; while upon the second a moderate sum is being expended ($205,000), to be supplemented as the school of education grows. On its southern stretches have lately been erected the small Genetics Laboratory, housing thousands of mice, rabbits, and guinea pigs for experiments in heredity, and the Woman's Residence Hall. When to these are added the Smith Memorial Building, and the first segment of the huge $3,000,000 Library which the University hopes to begin in 1918, this part of the campus will begin to have a crowded and prosperous air. The well-built and attractive Agronomy and Farm Mechanics Buildings there are already losing their lonely look.

In its equipment the University was long even more hampered than in its erection of buildings. Legislatures could be induced to appropriate round sums for construction, but they seldom left much to spare for furniture, and to set aside money for museums was unheard-of. Use of the Natural History Building was long delayed for want of chairs and desks. In 1902 the construction of the Chemistry Building cost so much that only $800 was left for equipment and every one of the battered desks in the old building was moved over.

"It certainly was a distressing feature," wrote Prof. Parr, "in making the new building ready for occupancy in the fall to see these old wrecks hoisted by rope and tackle to the third story and skidded into place for service again." The neglect of the library was for decades very unfortunate. But money has been increasingly provided, till under the mill tax law it is possible for the University to spend approximately as much for books and for imported chemical equipment, for example, as the richest endowed institutions.

The library, upon which nearly as much money is spent as at any other University (well over $50,000 a year), and which grew faster during 1914-15 than any except those at Yale and Harvard, has swollen quite beyond the bounds of the present building. To this fact the University is partly indebted for a very convenient arrangement of seminar libraries. Of the 400,000 volumes and thousands of pamphlets the University possesses at Urbana, about 100,000 volumes are located in Lincoln Hall, now full, about 20,000 in the Law Building, about 20,000 in the Natural History Building, and smaller collections in other structures. There is little duplication of books. The seminar libraries are special reference collections upon shelves conveniently open to students and flanked by tables which may be converted into desks by thesis-writers. But they serve for much more than reference, for the long, brightly-lit rooms and the rows of fresh bindings are a standing attraction to browsing undergraduates. The central library serves as a key to the whole, its catalogues showing clearly in which building a volume is placed; and its officers are obliging in arranging transfers of books. The fact that funds are constantly at hand with which to buy books smoothes the path of

research, although many workers must still do without needed volumes. The faculty committee governing the matter sees that the weak spots are systematically strengthened. Men who have joined the faculty with fears that their work would be hampered by poor library facilities have confessed finding more advantages here than they expected.

The acquisition of special collections began in 1905, with the purchase of the Dziatsko collection on library economy from the librarian of Göttingen. It has been followed by the purchase from German scholars of the Dittenberger collection of the classics, the Heyne philological collection, the Gröber collection in the Romance languages, the Vahlen classical collection, and the Aron pedagogical collection. From the United States have come the Karsten collection in French and German literature, the Rattermann collection of 7,000 volumes upon German culture in the New World, and various gift collections of smaller size.

For a library allotted so much money, that at Illinois shows an unusual enterprise in increasing its collections by the solicitation of books obtainable by exchange or gift, and of useful public documents. A typical endeavor is the building up of a large collection of real estate maps of Illinois communities by obtaining from insurance companies, free or at low cost, the old maps of their expensive series; another is the systematic acquisition of official labor union reports in America and abroad. There is a library staff of sixty, including part-time assistants. The forty-five students of the library school perform no labor except that directly useful to themselves, as cataloguing, classifying, and ordering books. They have no time, for the two years of professional-graduate study the school embodies are

crowded. The whole book collection may be expected to grow at the rate of from 35,000 to 50,000 volumes a year in the next decade, which will bring it not far below the total of 1,000,000 volumes which a Senate resolution recently set as the University goal in that time. Special effort is made to interest students in reading by keeping before them a "gilt star" collection of fiction, and other open shelves of readable books, while small traveling fraternity libraries have been proposed. The new Library Building is designed to give room, when complete, for as many as 5,000,000 books.

Aside from the library, the most prominent general collections are those of the old art gallery, the classical museum, the museum of European culture, and the group of scientific museums. The art collection has been dispersed since Gregory's time, eight of the large casts being in the foyer of the Auditorium, a large number of busts in the seminar rooms of Lincoln Hall, other objects in the art and design quarters, and some of the engravings in various offices. With other paintings and prints recently acquired, it is hoped to give it suitable housing and room for expansion in the Gregory Memorial Building. The museum of European culture was opened in Lincoln Hall in 1913 with an address by Kuno Francke, and has grown rapidly, though it has thus far emphasized the medieval period. There are copies in it of Romanesque, Gothic, and Italian and German Renaissance sculptures, reproductions of paintings and ivory carvings, of several suits of armor, and of seals of the middle ages; a collection of original implements and weapons of the stone age, early printed books, some illuminated books of hours, and a number of models of theaters, with several hundred rare coins

from a Chicago donor. The museum of classical archæology and art has obtained many casts which complete historically those in the art collection. To these have been added originals and reproductions of coins, terra cottas, and other small antiquities, models illustrating ancient household and civic life, and a number of interesting specimens of Egyptian pottery necklaces, figurines, etc., obtained through the generosity of another Chicagoan. Both museums show an appreciation of the educational value of collections of photographs, and while both are in their infancy, they will be granted means to grow. It is hoped that to the museum of European culture the foreign and naturalized elements in Illinois, especially the German, Scandinavian, and Italian stocks, will contribute works of art, books, and objects of historical interest.

Among the scientific collections first mention should be given that in entomology, one of the largest in America. It includes an elementary exhibit of 6,400 common specimens, the collection of Andreas Bolter, of Chicago, of 120,000 specimens, representing 16,000 species, and 315,000 pinned insects of the State Entomologist's Office. The herbarium, thanks mainly to the State Laboratory, contains 65,000 mounted plants, while there is a collection of 35,000 named specimens of fungi. In geology the University has profited both by private collections and those of the State Geological Survey, and has over 10,000 rock specimens, 12,000 mineral specimens, 50,000 paleontological specimens, including the collections of Tyler, McWhorter, Worthen, and Hertzer, and 3,000 shells. The zoölogical collection presents a full view of the fauna of Illinois, with a large number of mounted mammalia from all parts of the world, mounted birds, and mounted cold-blooded

vertebrates. The museum collections of all the engineering departments are large, for from the very beginnings of the University their comparative prosperity has enabled them to obtain growing stores of blue prints, working drawings, photographs, building materials, fittings, and parts of machinery; while the attention Western engineering and architectural interests have paid the departments has brought them many gifts. Agriculture of course has all the illustrative materials needed, from wax models of fruit to a collection of threshing machines.

Twenty-six departments of the University are equipped with laboratories, placed in a dozen buildings. The University's isolation necessitates possession of some materials that in a large city the departments could find elsewhere. The engineering group makes a particularly good showing. The locomotive testing laboratory is the most complete of its kind in America, being fitted to measure speed and power of locomotives, and strength of rails, car axles, couplers, and brakes; while it has its own electric and steam test cars. The mining engineering laboratory contains materials for drilling, blasting, mine rescue, and ore concentration work. In the mechanical engineering laboratory are large experimental boiler plants and gas engines, and such pieces of special equipment as an ice and refrigerating machine capable of making one and a half tons of ice a day. In civil engineering are satisfactory road and cement laboratories, and in electrical engineering a wealth of machinery—sixty direct or alternating current machines, fifty transformers, experimental telephone switchboards, and so on. In physics there is a collection of 5,000 pieces of apparatus, from a liquid air plant to an oscillator; fine machine work can be done in

the building, and gas, distilled water, compressed air and vacuum, and a wide range of electric currents are available in all its parts. The materials testing laboratory and hydraulics laboratory are among the best in America, and the ceramics laboratory has no rival.

The equipment in household science is inferior to that found but at one or two schools, and is quite adequate to the registration. In agriculture work is carried on not only on fields at the University, part of which has been under continuous experimental treatment over thirty-five years, but on nearly forty rented or donated tracts in various parts of the State. Horticulture has also twelve special plots scattered over the State, while at the University are large orchards, vegetable gardens, and greenhouses. Milk production is illustrated on a twenty-acre farm, with plants for manufacturing cheese and ice-cream. The University herds, flocks, and studs contain nearly 1,000 animals, largely pure-bred. Besides the laboratories in the central Agricultural Building, special laboratories are available in the Genetics Building for thremmatology.

The Twin City environment of the University is still far from ideal, for on the prairie immediately adjoining the campus have sprung up, together with blocks of attractive residences, other blocks of small and ill-kept frame houses. The portions flanking the northern part of the campus are the most discreditable. Southward the faculty residences in Urbana and the fraternity and sorority houses in Champaign are steadily improving the appearance of the towns. A few apartment houses are springing up; the business district that centers at Wright and Green Streets witnesses the rapid displacement of frame stores by brick and stucco. One by one the eyesores south of the Green Street line in both towns

are disappearing—a memorial church driving one out, a dean's residence another, an expensive structure for use as combined boarding and dancing hall a third, sometimes a fraternity house clearing out a whole half block. Trees everywhere are reaching a considerable growth, and most streets are paved. The towns have an atmosphere of spaciousness, quiet, and in summer of trim greenness that is very refreshing, and that hundreds of the faculty would not throw into the balance to gain the variety of a large city. It might be well if the towns were to coöperate with the University in erecting a planning commission to see that the two University districts and the campus were brought into harmony; but the problem is solving itself very well.

VIII

STUDENTS AND STUDENT LIFE

Characteristics of the Western University Student. Physical Sports and Military Training. Student Journalism. The Fraternities and Sororities. Religious Activities. Discipline. The College Year.

It is a frequent remark of faculty newcomers from the East that the Illinois student is perceptibly more earnest than the average college undergraduate. This earnestness, however, does not carry with it a greater ambition than is to be met with elsewhere. The student's industry, his intentness on problems of actual life, his practical interest in everything from making a dynamo to the theory of economics, are not given their due edge by a desire to strive towards high goals, and are accompanied by much of the limitation of outlook that characterize busy and practical communities. In a word, the Illinois student is industrious and energetic, but a little wanting in imagination. He bends himself to his semester's task with full realization that it constitutes one-eighth of his advanced preparation for life —such a realization as many Eastern professors would give all their time to instil; but he is prone to think of himself as called upon to play an average rather than a high part in life. The homes in which most students grow up, being middle-class homes with little leisure for ideals, dreams, and ambitions, are partly responsible for this; the youthful nature of most community life

in Illinois, with its comparative poverty of cultural and civic institutions, is another cause; the businesslike atmosphere in which the colleges, especially those of engineering and agriculture, work, contributes; and the fact that the students are far from the larger cities while in college, and have no opportunity to catch a quasi-competitive step with the actual life into which they must plunge—to see engineering work, business, newspaper work, law, as all these activities are carried on upon a large scale, and to set their eyes upon the goals in them most worth while—shares the responsibility.

This plodding zeal, this combination of earnestness and narrowness, is being broken down in both its elements; the students are neither quite so industriously practical nor so limited in vision as they were ten years ago. The State is growing richer; there are more of the prosperous and leisurely youth of Chicago and St. Louis; the thickening ranks of women students have had a liberalizing influence and to a slight extent have lessened the businesslike quality of University work; while the expanded scope of the curriculum, the varied personality of the faculty, the greater richness of life at the University now that it has become a major State center, broaden the student's interests while they dull his old sense of the grim demands of the world's work. To induce the students to look up and about them is something worth every effort. It is not to the University's credit that so few of the rank and file of its graduates have become community leaders; that it has yet made little impression through its alumni on the civic or cultural side of the State. The graduate of Wisconsin or Michigan might be adjudged to have brought from his college, thus far, a higher average of altruism and the impulse to democratic leadership. But

this is being changed; and it must be hoped that the change can be effected without unduly lessening the earnestness of which so many observers speak. It is this earnestness which is responsible for the high level of practical success reached by Illinois students as a whole—and of course few men can serve themselves without serving others. The faculty, those in a position to influence student activities, the student leaders themselves, have a difficult responsibility in introducing a higher degree of freedom and ambition into Illinois life, and yet excluding any trace of the dilettante spirit that so often accompanies it.

The practical quality of undergraduate life is nowhere better manifested than in the student activities. The periodicals best edited and supported are the *Illini*, which is a profitable and workmanlike newspaper—one of the best college newspapers in the country; the *Technograph* and the *Illinois Agriculturist*. The clubs which most evidently contribute to the equipment of the student, and are closest linked to his classroom work—the engineering clubs, law clubs, and so on—are supported with a spirit almost unknown in others. That highly characteristic entertainment, the electrical show, involves an amount of educative labor at which the students would rebel were it given them as a classroom task. There is also, of course, another salient element in student life—the element having its birth in the demand for pure fun and relaxation. The students have no better regular amusement in the towns than the moving pictures and second-rate vaudeville. They must fall back on their own resources, and they do so in a rollicking way in the annual circus, the post-exam jubilee, the stunt show, and a number of organizations designed for milder amusement. For the same reason,

upon athletics is concentrated an attention unusual in larger centers. The third element in student life, that which caters to the artistic or intellectual instincts—literature, drama, art, music, serious discussions of special topics—was until six or eight years ago starved in comparison with these two, and is just now coming into due place.

To say that athletics receives a rare degree of attention does not mean that under the circumstances it takes an undue part of the student's time. The undergraduate, with little of the theater, no excursions, no town dinners, and few concerts, naturally looks forward with eagerness to the football games or baseball matches that give him a regular Saturday afternoon thrill. The Home-coming and Interscholastic festivities are centered in a football game and a baseball and track contest respectively, and in these the presence of thousands of alumni and other visitors helps to generate a wildly exciting interest. Much is said about the unusual quality of "Illinois spirit"; in large part it is simply the student's unusual interest in the most widely appealing event, a battle between the home team and a rival. But this interest in a half dozen baseball and as many football contests is thoroughly healthy, for it takes little time and it in no way militates against the general participation of students in athletic activities of their own. President James has repeatedly expressed the fear that the students were becoming too largely spectators of, too little partners in, athletics; but with constant encouragement from the authorities, the students have tried to shake off this imputation. The teams usually practice and play on Illinois Field, and the inexpert have the wide south campus to themselves. On fine days it is inspiring to see this stretch alive

with class teams, fraternity teams, literary society and other club teams, and teams informally mustered. The campus offers two score tennis courts, and there is a good golf course. Time was when the University, chiefly through Hindu students, mustered a creditable soccer team. Lacrosse is played, and handball, while any fine day sees a string of cross-country runners lengthening out to the country roads. In this connection it must be said that no student has for many years left without appreciation of the services to the whole institution of George Huff, not merely as an efficient director of athletics, but as a man whose influence upon the moral standards of members of University teams has been of the highest sort.

Six years ago Director Huff estimated that not more than one-fourth the students obtained adequate physical exercise through participation in athletics. But this fraction is not discreditable, and it has been increased since. Athletics was long encouraged by the excusing of all members of University teams from military drill, and still is by a connection between class-team managers and the athletic association. In the spring at least, practically every male student is under constant invitation to join some class, club, or other group game; for in spring the vogue of outdoor sports is at its greatest. The winter offers no sports, as it does farther north, for during much of it the University is deep in mud, not snow or ice; and the impulse to enjoy the returning good weather is irresistible. A time-honored and yet spontaneous institution is the "spring celebration" which breaks forth on the first night that appeals to the student imagination as sufficiently balmy, and sends an hilarious mob snake-dancing downtown to mark the advent of the season. Baseball, too, with its

peculiar hold at Illinois, is played far more in the spring than in the autumn. The one step that would do a great deal to increase student exercise is evident: if a really adequate gymnasium, with a large indoor field like Northwestern's, were provided, the number of students who would carry their roommates off to a "work-out" in it would be doubled or trebled. The use of both the old and the new Armories for athletics, however, is helping solve the problem.

But it must not be forgotten that other factors than formal athletics contribute to the physical welfare of Illinois students. The undergraduates do not flock from neighboring apartment houses, but from dwelling and fraternity houses that cover several square miles. The procession that fills Green or John Streets as the students turn out for eight or ten o'clock classes, overflowing the sidewalks into the roadway, reaches three-quarters of a mile from the campus. The campus itself is roomy, and the student who has successive classes in the engineering shops, Farm Mechanics Building, and Natural History Building has covered more than a mile. For the lower classes military drill, week in and week out, with its route-step march to the south campus, its exhibition drills, its elaborate maneuverings and mock-battles, provides a fair measure of exercise. The civil engineering students have surveying tasks that carry them over campus and field; and picnics to Homer Park on the Vermilion twenty miles away, or to Crystal Lake on the outskirts of Urbana, are frequent during the week-ends of fall and spring. It is a rare student who on business or pleasure does not tramp to one of the city centers, a mile from the campus, two or three times weekly. In the warm Mays and in summer there are campus "sings" and concerts that draw students out-

doors at night. And no small place, finally, must be given to dancing, whether the student elects to go to a Union dance for a small admission at College or Bradley's Hall, to a fraternity dance, to a cadet hop, or to one of the grander balls—the Junior Prom or Sophomore Cotillion, when hundreds of dollars are spent on decorations for the old Armory, an orchestra and caterer are brought from Chicago, and 250 couples dance till two o'clock in the morning.

Next to athletics, the greatest student effort goes into journalism. If there is a total of nearly 150 men upon the first and second teams in the various sports, there is a total of nearly 100 on the staffs of the various publications. These are unfortunately still less the product of inclusive organizations than they should be, for it is a rare editor or business manager who can persuade more than a half dozen students really to work well. The *Illini* office was formerly in the Law Building, but it is now in quarters more spacious, if as low and dark, in the basement of University Hall: quarters where with profits of over $5,000 yearly it is replacing dingy and scarred desks, battered typewriters, and worn file-shelves by furniture of more attractive sort. Copy is all turned in and sent to the downtown printing office by nine or ten o'clock, and the heroic editor, thanks to two linotype machines, has usually put his edition to bed by twelve—in contrast to those of former days, who perspired in shirt sleeves at setting heads and arranging forms while the single machine clinked drearily away till two o'clock. The lot of the business manager is easier, for his task of obtaining advertisements from the local merchants can be done by day—and it is a bold and pinchbeck merchant who refuses to advertise. The officials have ruled that a full fourth of

the paper must be news matter, a reminder of the day when it was not. As a purveyor of intelligence, the *Illini* has improved steadily since the filling up of the course in journalism, but the quality of its editorials and its humorous column—the "Chuckler" once, the "Campus Scout" now—depends on the advent of some bright writer. The year book, too, has improved since the selection of editor and manager by a student-faculty board. In its political days the helmsmen of both publications, popularly chosen, were often students with more suavity than brains.

But below certain levels the *Illini* and *Illio,* with their fixed traditions, have never fallen. The magazine, the *Illinois,* while usually fair and sometimes excellent, has twice or thrice descended to a plane where it had better not have been published at all. Its besetting vice is a tendency to exalt journalistic appeal above literary standards. The *Agriculturist* is edited with more vitality, and its technical articles invariably exhibit special knowledge and care in its presentation, while the constant interest of the faculty assists in keeping its pages full. It is published with an eye to the interests not merely of the college but of the general farming world, and there are many farm journals that contain less of original and valuable matter. To a limited extent it is subsidized by the college. Though a thinner publication, the *Technograph* is in quality quite as good, for the editorial board prevents it from reflecting the unevenness of the work done in the engineering societies. Its contents are not so amateurish as are many literary papers in the *Illinois,* nor so scrappy as are many of the contributions to the *Agriculturist.* The *Siren,* considering that in years it is a mere infant, has been remarkably successful. It will doubtless be stable, for as

the *Agriculturist* and *Technograph* appeal to the practical side of the Illinois student, it appeals to his craving for amusement.

Though a required course for all but law students, and not an undergraduate activity at all, military training plays an important part in shaping all student life. It is accepted with remarkable zest, for the brigade drills with a spirit and conscientiousness unknown at most land grant institutions; and it is the most leveling of University processes. The 2,200 students who pour in at the Armory door represent all sorts and conditions: the son of the millionaire beside that of the village blacksmith, the engineer beside the "lit," the fraternity man beside the "barb," the raw freshman beside the sophomore. The men who appear a moment later in trim uniformed ranks wheeling endlessly out on the parade ground are one body, as closely unified a crowd as Tarde ever classified, the only distinctions those of height and military rank. The brigade is complete, from artillerymen and stretcher corps to wig-wagging signalmen, and it is completely at the command of the student colonel. For weeks at a time the commandant detailed by the United States Army might not approach the drill ground, and military training would move on as smoothly as ever; for the sense of responsibility on the part of the officers is perfect. Competition is keen for the University and Hazelton medals, given to the best drilled students (on spring nights odd corners of the campus are vocal with aspirants being put through the manual of arms by friends), and for the best record in company drill and marksmanship, the medals being awarded on Military Day. The sham battle of late spring, when one company after another of khaki- or gray-clad cadets storms the ridges below

the south campus, has competitive elements and brings out large crowds of townspeople. A proud part of the battalion is the first military band of eighty pieces, with a fife and drum corps that swells it above one hundred—a band that dwarfs any other in the State.

The brigade at Illinois is the largest cadet corps in the United States, consisting of two regiments of twelve companies each, of two bands, of a battery of field artillery, of a signal company, engineer company, hospital company, and foot company. Under the National Defense Act of 1916 uniforms are furnished by the Federal Government, and with the provision under this act for the establishment of one or more units of the Senior Division of the Reserve Officers Corps, the number of United States Army officers stationed at the University rose to twelve. Students who enter these units devote four years to drill, instead of two, giving five hours weekly during the last two to military art, and they must twice attend a month's summer training camp; it is believed that they will emerge from this training excellent officers. The University has a Rifle Club with a membership of nearly two hundred, and, in general, the interest of the students in military training is probably equaled only at a few of the other land grant institutions—it is certainly surpassed at none. Some of the commandants, as the old Indian-fighter E. G. Fechet (1900-09), have been hugely popular.

Of the other activities, oratory and debate are slowly gaining a better place. The literary societies have devoted themselves almost entirely to these forms of the "literary," leaving special clubs to pursue the short story and the technical paper; while, as in Gregory's day, they keep alive a good many social activities. The intercollegiate debating contests seldom draw more than

a small number to the Auditorium, and this is not strange; for few students find many elements of the entertaining in such debates as they are ordinarily conducted. But competition is keen for the teams, and this is all that can be asked.

The fraternity has had a phenomenal development at Illinois, traceable to the fact that it is much more than a club; for it is a home which takes the place of the dreary small-town boarding house, and offers many comforts and a picked companionship at low cost. The University would be a crowded and more cheerless place without it. The last fifteen years have seen one club after another obtain a national charter until the supply is almost exhausted, and the next ten will doubtless see the roster of local fraternities keep pace with the increasing registration. The internal organization is usually good, and in all are upper-classmen who take seriously the obligation to look after the younger men, and to maintain standards of scholarship. As fraternity men, who are one-fifth of the student body, engage in more extra-curricular activities than others, their scholastic averages are lower, but not glaringly so. The dean of men has repeatedly found fault with them for various reasons. Some pay too much attention to social parties—a more masculine atmosphere would benefit them. The "rushing" and pledging of men is hastily done, and the preference for city over country students too marked. The alumni take too little interest in the fraternities. Yet there is no gainsaying the democracy of fraternity life, and the fact that the men are not clannish, are more cordial than many diffident outsiders, and have a greater public spirit in regard to University life. The dean testifies also to the ease with which disciplinary care is exercised over the fraterni-

ties. "I have always found the fraternity man willing to come halfway. As a college disciplinary officer I long ago discovered that men in a fraternity are more easily gotten at than men outside. The reason is evident: if a man is in an organization it is not only possible to get at him personally, but one may enlist as helpers all the other men." The publication of fraternity scholastic averages by the dean has had a salutary effect.

In their beginnings the fraternities rented rooms over the stores downtown; later they moved into frame residences; and since 1906, when Alpha Tau Omega completed the first distinctive fraternity house at a cost of $26,000, a score of large structures have gone up. Two large houses in Old English style cost respectively $18,000 and $25,000, exclusive of sites and furnishings. One in Italian Renaissance cost $22,500, one in Colonial style $33,000, and others have ranged in expense between $15,000 and $35,000. While usually occupied to crowding, these have many little luxuries lacking in dormitories, from billiard rooms to libraries. The University has never seen fit, as at Northwestern, to encourage fraternity building, and it has never been necessary, the alumni assuming readily the financial responsibility.

Of the male students about thirty-five per cent. earn a part of all of their expenses, and it is eloquent of the democracy of the undergraduates that about one-fourth of these are fraternity men. In Gregory's time those who were poor, following Scotch example, brought their potatoes and corn-meal in order to "bach it." Now they act as commissaries or waiters at boarding houses, work on the farm, serve as janitors, clerks, or stenographers, as salesmen, laundry collectors, or so-



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licitors, or find expert employment as draughtsmen or student assistants in laboratories. Bricklayers, barbers, carpenters, all attend the University. A few years ago several farmers' sons borrowed the family cows, drove them to the University, and lived comfortably and independently during their college course by selling milk morning and evening. But student opinion and the attitude of the authorities favor the principle that no man not driven to it by necessity should rob his studies and his leisure of the time required to make a partial living.

The life of the Illinois girl has improved greatly in that the larger number of women has made friendships of a congenial sort easier, adapted the University atmosphere to feminine life, and created a set of distinctively feminine activities. Some years ago life for those who could find no place in the sororities or church dormitories was often distinctly unpleasant, and the conviction that something must be done to improve it was responsible for the decision to build a Residence Hall in 1916. The complacent acceptance of the principle laid down by Michigan for younger State universities that the outside life of students required no official provision was responsible for a considerable amount of real misery. It meant that a girl in a boarding house had to endure not merely many physical hardships, but was sentenced by environment, in many cases, to a starved social life. A survey of living conditions by the Dean of Women several years ago disclosed the fact that a few houses were dirty, a very few had vermin, and a large number were ugly and ill-furnished. A prime cause of discomfort was inadequate bathroom facilities, and in her report we read that "the average number of girls to one bathroom is eight." The paucity

of rooms for general social purposes was also marked. One parlor usually served seven or eight girls, and at week-ends all but one, if so many had callers, had to take their guests walking. Of four of the best rooming houses in the towns, one landlady reported "little social life in the house, but the girls go out some"; another, "little social life inside, girls go out a good deal"; two, "very little social life either inside or outside." It is an eloquent fact that approximately one-third of the girls were found to have changed their addresses during the college year. Of late, the supervision of rooming houses has been very strict, and matters have improved. But general university experience has shown that residence halls may easily be made self-supporting, and there is no doubt that the first one at Illinois will be welcomed by both the students and their parents. As sorority members have sometimes made felt their condescension to students outside, the fact that a large number may now elect to live in the Residence Hall rather than in sororities will be also a salutary restorer of democracy.

A large number of girls at the University are subjected to the temptation to attend more parties than are consistent with preservation of their scholarly standing or health, for the proportion of girls to men is one to five, and the attitude of the men one of greater friendliness than at most coeducational institutions. The temptation is usually resisted, and on the whole coeducation has proved a success. The mingling of the sexes accentuates and confirms the manliness of the one and the womanliness of the other; certainly there is no affectation of effeminacy among the men, as at some men's colleges, or of mannishness among the women, as at some women's colleges. The preponderance of women

in some of the liberal arts classes has had little perceptible effect in driving the men into others of assumedly stiffer requirements, as some theorists on coeducation declare it always does. If the women were regarded as they are at some large coeducational universities, or at some men's universities with women's colleges near, the moral effects of coeducation might be doubtful; but they are regarded as equals, though with the right touch of gallantry.

The University's surveillance over student life is steadily becoming closer, for as the undergraduate body grows and its activities become more complex, a *laissez-faire* policy becomes less and less feasible. The most intimate and yet flexible guardianship of the students is exercised from the offices of the deans of men and women. The duties of each are the same, but the obedience of the women is so much readier that in disciplinary functions Dean Clark has almost monopolized the field. The student who misses classes, or fails in studies, or hazes, or smokes on the campus, or drinks, or joins an organization of secret membership, or commits any other infraction, appears at once in the dean's office. Through years of experience the dean has developed a remarkable tact and shrewdness, enabling him to see through any sham. At least one parent of almost every student punished at the University, he tells us, is always represented by the culprit as in some physical, mental, or financial condition which will prove instantly fatal if his disgrace becomes known. He remembers instances of parents who have assured an expelled son in his presence that never again would they assist one who had erred so persistently, and who in another month have taken him to their hearts again. He tells us that the man who whines in accepting his punishment is

rare, and that those he sends away from the University often have a peculiar kindness for him; realizing that his punishment turned them in time from wrongdoing, they are constantly writing, or sending him the baby's picture. The efforts of influential parents to have sons given a second or third trial often exasperate. He tells of foreign students who did wrong and then confessed in sudden shame, not for themselves, but for their country. Finally, his memory has its due instances of youths who have won mercy by their manly facing of the consequences of an offense.

The value of the hint which this office of the dean of men, originating at Illinois, has given to university administrators, may be gauged from the fact that in recent years its counterpart has been established in a dozen large institutions. Its main function is by no means the disciplinary one; having charge of student activities and general social life, class attendance, and the progress and interests of individual students, the dean is concerned with building up an attitude of undergraduate trust and friendliness, rather than one of fear. The office is much more that of a wise and kindly advisor than of a corrector. The dean tries with success to come into personal contact with every student who reaches the University, and to make felt his special interest in the latter's health, studies, and character. It is because of his activities that there is probably a greater harmony among the fraternities than among those of any other large institution; and it is largely due to them that there is far less drinking, less gambling, and less general dissoluteness about the University than about the average great place of higher education.

One of the most encouraging aspects of student life

has been the gradual decline of hazing and of the rough celebrations of athletic victories in which the students once indulged. The history of freshman-sophomore animosities at Illinois is a long and not a pleasant one. In Peabody's and Burrill's time the freshmen were accustomed to hold a dance in one of the downtown halls, and for ten years it was usual for the sophomores to try to break it up by kidnapping their enemies or throwing eggs or chemicals, just as till the abolition of the junior exhibition the sophomores tried to disrupt it also. After the culmination of these disturbances in the expulsion of nine men in 1895, the color rush, which had been initiated in 1891, and which came to be held at night, took their place. There was so much slugging at these rushes that in 1903 Dean Clark brought the contest into the open, and it was held under strictly enforced rules. It might have been long retained had not the classes become so large that the freshmen became absolutely certain of winning, and in 1908 the pushball contest was instituted on Illinois Field—inexpert management of the first one resulting in a long list of the injured. As the classes continued to grow larger, the physical danger to individuals increased, and in 1913 the sack rush, which divided the crowd, was introduced. During all these years the opposition of the authorities to hazing had grown more decided, and President James began his administration with a determination to stamp it out by stern expulsions. So well did he preach against it that the sophomore classes repeatedly adopted resolutions denouncing it, though offenses were for some years flagrant. In 1908 a special effort was made to instil sentiment in favor of beginning and ending hostilities with the pushball contest. The next spring Dean Clark addressed a special warn-

ing to freshmen against participation in hazing on their return, and the succeeding fall the early suspension of a few hazers deterred the men from later outbreaks. Finally, in 1913 the unworthy tradition had dropped almost out of sight. A little later, there seemed to be a waning of interest in even the sack fight, and in 1915 the *Alumni Quarterly* expressed a general opinion when it compared it to a mattress factory working overtime, and called it childish. There were no mourners when Dean Clark abolished it. As for hazing, the *Quarterly* then saw it going the way of the charivari: "If any freshman was boneyarded this fall, the splash was pretty feeble. It is doubtful that the old verb haze will ever recover."

The same sense that mature students should be above rowdyism was responsible for the decay of athletic celebrations in their old character. At one time they added to something like the spectacular enthusiasm and joy of a political rally no little downright turbulence. The celebration began calmly with a bonfire near the campus, grew fervent in the course of a noisy snake-dance downtown, and ended with a mob assault on a local theater for free admission. When town hoodlums encouraged its destructive bent, and the town officials proved excitable, trouble was bound to ensue. Following the Iowa game of 1908, for example, the crowd that surged at the theater in Champaign was confronted by an unusually hot-headed mayor. The police attempted to defend the entrance, and as the mayor exhorted them to "shoot to kill," bricks and clubs began to fly. In the affray one of the officers was badly injured, an athlete was arrested and lodged in the Town Hall, and only the timely appearance of the Dean of Men prevented the partial demolition of that structure. The

Chicago and other papers made sensational use of such affairs, and they hurt the University all over the State, so that steps by the authorities were determinedly taken to end them. In this the Union assisted, and one class tried to tame the celebrations by providing a "celebration urn" on Illinois Field—which was almost totally ignored. This tradition, too, was gradually forgotten, and the present celebrations combine vigor with orderliness.

As for scholarship, the best students are the women, and to explain this we need not discuss the mooted point of mental and temperamental differences between the sexes. Relatively few women are forced to be self-supporting; they may sidestep distasteful courses, which few men can do; the vast majority go to college because of an interest in college work, while many young men are sent by their parents. The University athletes prove as good students as the average, and in general, attacks on undergraduate activities will find little basis in a study of scholastic marks at Illinois. It has clearly been shown that club members, debaters, student journalists, the officers of the cadet regiment, of the Union, and of the Christian Associations, hold better positions in their classes than those who do not enter such activities. This is undoubtedly because of their superior mental attainments, and it is true that they could better their work if they stayed out of the more engrossing pursuits. But it may be believed that a middle course is best, and that while the poorest students have little to do with college activities, and the very best also are interested in little outside of college work, those who engage moderately in extra-curriculum affairs obtain the broadest college training. The chief reason for wishing that student life were less highly organized is that

these various "circus rings" prevent the undergraduates from doing the general reading, or from engaging in the intellectual discussion and debate, which would greatly profit large numbers. The atmosphere of the State University is fundamentally rather unfavorable to eager, speculative minds. The earnestness of those who value knowledge as a means of getting on is not encouraging to the disinterested spirits who value it for its own sake. The trend is to the practical consideration of questions of forge and market place, not to the speculative consideration of political, social, ethical, or philosophical topics. While the curriculum as a whole must always keep the emphasis upon the utilitarian, there might well be more extra-curricular agencies to divert the mind of the student to the purely cultural. It may be of little moment that the student managing the *Illini* might have got his lessons a little better had he been free, but of a great deal of moment that the drain on his time estops him from reading the latest book of history, sociology, or poetry.

A Senate committee on standards of scholarship reported in 1916 that nearly one-half of the faculty members questioned thought such standards lower at Illinois than at one or more institutions with which they had been connected, though others thought them higher and still others thought them equal or superior as measured by the performance of the average man, but inferior as regarded the work of the best students. Comparisons unfavorable to Illinois were most frequently made by the departments once grouped in the college of literature and arts. The committee's conclusion was that the University's requirements did not differ materially from those of the State universities which are its natural competitors. It found, however, that the authori-

ties at Wisconsin and Chicago were less conservative than at Illinois in eliminating incompetent or careless students, especially at the end of the first semester, and it recommended a decreased tolerance of such students. Commending the University's elimination of the class of conditioned freshmen, it proposed more exacting requirements of the high schools, and the adoption of measures which would fix more clearly the responsibility of the principal in certifying his students as prepared for college—many principals being peculiarly subject to local pressure. In the attempt to reach the standards of the three or four best Eastern universities, stronger efforts should be made to build up "honor groups," to stiffen the classroom demand, and to better the intellectual atmosphere. One far-reaching recommendation was that the transition from "junior-college" to "senior-college" standing be marked by something more than the simple completion of a specified number of semester hours and that some form of test, adapted to the particular college, be instituted to determine whether a student should receive a certificate and be promoted to the "senior-college." Such a certificate might ultimately be required for admission to professional courses. It was also proposed that the undergraduate curricula be reconsidered with a view to new requirements for graduation at least for honor students, permitting competent students to pursue approved lines of study with less detailed supervision but with a new form of regular examination; and that to enforce intensive work the semester hours be reduced. Finally, $100 and $50 scholarships were proposed, and a more earnest attempt by faculty men to put "intellectual deviltry" into fraternity and club life.

For the present, the University may take comfort in

the fact that student scholarship has steadily improved in the last fifteen years. Much of this is traceable to the emphasis which President James, assisted by a group of the faculty, has thrown in the years since 1904 upon scholarly breadth in the curriculum, as through his readiness to make desirable appointments irrespective of outward demand for them; much to the direct interest of himself and this group in undergraduate standards.

The college year holds a vast of various things not mentioned in the foregoing summary; and it is more generally light-hearted than it would indicate. The essential spirit of the student community baffles description, but there is no doubt either of its democracy or optimism. Despite the leaven from homes of wealth, the social strata are forgotten more completely than they would be in an older college community, and the students are measured only by capacity and good-fellowship. The cheerfulness of undergraduate life is also assisted by its want of sophistication. The majority of students, from farms, villages, and towns smaller than Peoria, are little acquainted with either the virtues or vices of urban communities. It would be hard to say how many freshmen had never seen a metropolitan theatrical performance, or entered a saloon, or visited a gay restaurant, but the number would be very large. This unworldly quality has its disadvantage, in that the students are not inspired to alertness by acquaintance with the complex facets of our civilization; but it carries a fresh naïveté that makes the University a pleasant place for the average impressionable youth.

The autumn opens with the excitement of "rushing," of football practice, and of adjustment to the ever-changing University. The fine September weather sees the streets alive with automobiles brought in by fra-

ternity alumni to help win to membership the freshman with money, athletic promise, or other engaging qualifications, the fraternity houses thronged at night with chatting men, and the windows thrown open at dinner upon hospitable tables. By the end of a fortnight the strenuous competition has resulted in the pledging of 300 men. Four o'clock sees at one end of the campus sagacious groups following the squads that dive for the ball or that face each other in the first line-up. At the other the sophomores are holding in line the awkward freshmen who have become the matrix of the brigade, and junior and senior officers bellowing their outraged commands at marching awkwardness. "One! One! One!" Near by the first and second class teams are scrimmaging, the runners file away over the prairie, and the tennis courts are alive with white figures. On the campus walks gather groups lobbying for class elections, and at the corners wait boarding-house commissaries, and solicitors for the Y. M. C. A. and Athletic Association; while from the *Illini* office a dozen competitors for staff places issue at once. The bulletin boards are bedecked anew, the store exhibits are freshened, and on one of the fine days the student body blackens upper Burrill Avenue and is swallowed into the Auditorium for the first convocation. Perhaps once may occur a good-natured mauling of some freshman who has dispensed with a green cap, or a caricature of the greenhorn emerge in rustic clothes and with carpetbag seeking a cheap room at the fraternity houses. Two thousand new students are learning the University yells, and realizing that the patriotism that goes into shouting for Illinois represents not merely the institution but the State.

A little later comes the sorority pledge day, ending

a friendly struggle conducted for just a fortnight under rules of war drawn to cover the minutest detail. No sorority may invite a "rushee" for more than a carefully limited number of occasions; none may entertain her, except at week-ends, after seven o'clock; none may breathe a word upon sorority affairs. On the last great day invitations are sent out, answers received, and at two o'clock the "rushees" proceed to sorority homes, to be kissed and rejoiced over by future sisters, while derisive male spectators imitatively fall upon each other's necks, shout, march past with impromptu orchestras, and wheel in comrades masquerading as girls in barrows, with humorous signs about their necks. Later still comes the first practice game of football, when a sweating team administers a defeat to some small neighbor before a lackadaisical crowd out merely to see how large the score will be. The first large dance is that of the agricultural college, with the old Armory trimmed with leaves and corn. Finally Home-coming rolls around in November, with thousands of visitors packing the towns for the week-end. On Thursday night a mass meeting is addressed by alumni. On Friday a class championship game is attended not only by students but by the Senior Hobo Band, a gathering of men in dilapidated costume, with others representing toughs, governors and generals, cartoonists' creations, prize fighters, advertising notabilities like the Gold Dust Twins, and a German or Italian band; and on Saturday there is the great football game with the strongest possible University rival, witnessed by 15,000 people. The first concerts and lectures follow rapidly, in early December comes the Junior Prom, and a week later the Oratorio Society gives Handel's "Messiah."

After Christmas basketball, track, swimming, and

fencing sustain with some difficulty the interest in athletics. The post-exam jubilee, founded in 1901 to assist Christian Association work, falls in the intersemester vacation, and is given before a packed Auditorium—a sort of college "Follies." In alternate years the electrical show is held in February at an expense of perhaps several thousand dollars and on floor space of 40,000 square feet, with exhibits running from an electrical kitchen and complete electrical railway to an electric calendar and such devices as one which fries an egg on ice. The Military Ball comes, perhaps with the Governor in attendance, the student opera, the Irish banquet, the smokers that used to hurt the reputation of the University among haters of tobacco, and perhaps a legislative inspection, with as determined an effort to parade the University's weaknesses as is ordinarily made to conceal them. At some time during the year the Senior engineers start for their inspection of Middle Western engineering establishments and advanced library students are distributed among municipal libraries for practice work.

Spring is the season that treats the Illinois landscape most kindly; and in May the carefully gardened campus, with the soft haze of morning over it, is a scene of delight. The student body wakes to its greatest activity. There is a steady succession of baseball victories on Illinois Field, the bleachers crowded and not too complacent to cheer. The tennis courts are filled from early morning till the last light has gone at night, the chorus of the physical director's protegés echoes from the open gymnasium window, and the brigade, now attaining a fine polish in drill, grounds arms in a glittering line across the south campus as the band plays. At night a short band concert draws thousands

to the lawn in front of the library, and the fraternity and rooming-house porches are hung with swings by heavy chains and massed with mandolin-playing students. The Maypole dance, once a simple attraction on the site of the Woman's Building, with the spectators seated on the grass, now a huge pageant that draws a crowd to the bleachers to watch the Elizabethan and other folk figures, usually marks the beginning, on Thursday, of the Interscholastic week-end. These days of the Interscholastic are filled with more events than those of Home-coming, and bringing to the University not only alumni but the high school athletes of the State and their friends, draw an even greater number of visitors. The same evening sees the Stunt Show of the sororities, designed to assist the Y. W. C. A., and in nature like the Post-Exam Jubilee, though usually more clever, and always more delicately conceived. On Friday afternoon there is a combined track meet and baseball game on Illinois Field, with sometimes an exhibition drill, and that night the high school oratorical contest. Saturday morning the athletes of nearly a hundred high schools contend for first place; in the afternoon is another ball game; and at night comes the Interscholastic circus—the climax of the week. Opened by a circus parade of monstrous and unheard-of animals wabbling across the Field, their eyes glowing and their nostrils breathing flame, its three rings with forty different attractions, its two bands, its adept clowns, and the relay race run by champions of the different sororities, bring the whole to a welcome close.

Commencement is less crowded than the two weeks preceding it. The seniors, graduate students, and faculty remain, but few others, for the Illinois summer is too busy to permit the three lower classes to loiter. The

two towns already begin to take on a spacious, leafy, droning atmosphere. The fraternity houses are in part given up to bevies of chaperoned young ladies, the members moving out to make possible a house-party for the senior ball. About the campus there is a preponderance of older faces, and the streets are lined with automobiles from Chicago, St. Louis, Indianapolis, and other cities. Saturday night—to give a typical but not invariable program—the last large informal dance is held at the old Armory, where the military band plays a concert for an hour, and the floor is then cleared for waltz and two-step. During Sunday afternoon the baccalaureate sermon is preached with some formality by an invited minister. On Monday are held the traditional class-day exercises, various elected representatives reading the class history and class poem, and the valedictorian and salutatorian appearing; while the ceremonies include the Hatchet Oration, in which a Senior, dwelling on the virtues of his classmates, delivers to the Junior class the much-carved hatchet, emblem of Senior responsibilities. Time is also found for the dedication of the Senior memorial, a gift to the University of drinking fountain, stone seat, bronze ornament, or other permanent adornment—nowadays costing little less than $2,000. In the afternoon there is a lawn concert by the band, the Phi Beta Kappa and Sigma Xi addresses, and at four o'clock, a reunion of the older classes. That night the Mask and Bauble Society presents a play, and in the Armory the Senior Ball, with the most expensive music and decorations of the year, lasts till two o'clock. Tuesday is given up in the main to the alumni, with a convocation in the afternoon and a reception at night. Finally, on Wednesday morning is held the sparsely attended Senior breakfast; and at ten o'clock the pro-

cession of graduates forms, and marshaled by military officers and led by the military band, with the faculty and sometimes the Governor and his staff at its head, marches between two long lines of spectators and friends, with gusts of handclapping, to the Armory. Its numbers have been reënforced by the arrival on special cars from Chicago of the graduates of the departments there. The President or a chosen orator of distinction speaks, and after the delivery of diplomas, the procession returns to the stretch fronting the Library, where the University song, "Illinois Loyalty," and the State song, "By Thy Rivers," have their last heartfelt rendition.

In the feeling that moves every Senior as the great crowd of black-gowned graduates breaks up the State has its best reward for the thousand dollars it is estimated to have spent on everyone to whom it delivers a diploma. They go forth that afternoon to all corners of the State and to every trade and profession—to the farm, the shop, the railway, the architect's studio, the newspaper, the high school and college classroom, the counting office, the lawyer's study; and with the rarest exceptions they go prepared for work. But it is less their skill that rewards the commonwealth than the patriotism that has been unconsciously bred in them by their four years at the best fountain of knowledge the State has been able to provide; their feeling that their new mental and moral equipment, their quickened enthusiasm and ambitions, their sense of an obligation to service, are all owed, not to some forgotten private benefactor, but to the public idealism and the public forethought.

IX

RELATIONS BETWEEN THE UNIVERSITY AND STATE

The Less Tangible Service of the University to the State. The University as Regulator of the High Schools. Investigative and Extension Activities in Agriculture. The Smith-Lever Act. Practical Engineering and Scientific Investigations. The State Offices at Urbana. Historical Work. Miscellaneous State Services.

It is a truism that the interest of the average democratic community in an institution of higher education never manifests itself in spontaneous general support, but must be stimulated. Certain groups may voluntarily offer whole-hearted assistance; aside from them, there is a vast deal of indifference and inertia to be overcome. It was twenty years, as we have seen, before Illinois had commenced to overcome it, and more than forty before she had sufficiently done so to be sure of her future. She won her way to the hearts of the people, in the main, by turning out men and women skilled to serve them; by the insensible results of her purely educational activity, and the steady uplifting of popular spiritual and intellectual ideals. To a lesser extent, she has done it through the making of investigations, through the construction of commercial and mechanical devices, and through adding to the material resources of the State in various ways.

The University has never forgotten that its principal

business is to train young men and women for their life activities. Up to 1915 it had paid little attention to extension instruction, feeling that it could not divide its energies. It has rather yielded to than encouraged the efforts of commercial and civic bodies of the State to borrow faculty members. When Prof. Fairlie, completing his work as director of the State Economy and Efficiency Commission, was asked to undertake other governmental labors, he was plainly told that he was approaching the point where he must choose between academic and public employment. Nor has the University ever forgotten that even the work of the experiment stations, of its agencies in research, and of the State scientific offices connected with it should be made directly contributory to the instruction offered graduates and undergraduates. The unfortunate experience of neighbors which have gone too much into the streets and highways, or into capitol halls, commends the sanity of this general principle. Presidents James and Draper have both held that the distinctively educational activities must primarily be kept before the people, and that the extension lecturer who travels over half the State cannot well meet his classes at home.

Even as it is, there has been some apprehension that the University was going too far in its emphasis upon direct as opposed to intangible service to the State. There is danger, wrote Dean Kinley in 1910, "that too much emphasis will be put upon this work, and that it will become so important in the eyes of the public, and particularly of the Legislature, that it will interfere with the proper enlargement of, and adequate appropriations for, the educational work. It is not an uncommon thing to hear criticisms of the large appropria-

tions made to the University. The critics forget that the appropriations include large sums intended for work done *at* the University for a direct service to the State, but having no connection with the immediate and primary work *of* the University. . . . Unless some care is exercised, we are likely to find ourselves in the position of having our principal work choked or curtailed from insufficient means, because of too large a proportionate increase of the means devoted to other work." The mill tax has only in part destroyed the force of this warning. There is little doubt that, as the mounting attendance at the University will for years tax its resources, the mistake will not be made of turning it too largely into a research station. Nor do the people of Illinois demand steps that might lead to such a mistake.

The University is always glad to call the State's attention to the more evident of these intangible services. There is the plain fact that the greatest sculptor of Illinois, the half dozen best architects, the Representative who has become minority leader in Congress, the best civil engineers, several of the most prominent journalists, practically all the progressive farmers, a number of the best-known judges, and an extraordinary proportion of the school superintendents, are its graduates. The University is too young to have a long roll of distinguished alumni; but it undoubtedly has more than any other in the State. It is regrettable that it has never yet had a Governor, nor a Senator, nor a Mayor of Chicago. But the rising generation all over the State, in all walks of life, is increasingly tinctured by Illinois graduates. Of the 35,000 matriculants, over 3,500 are resident in Chicago, and over 20,000 in Illinois. Not less than 3,000 of the educated farmers, 1,000 of the merchants, 2,000 of the engineers, 250 of the architects,

and 2,000 of the educators of the State are men and women who have at one time attended the University.

Where the University comes closest to the life of the State is in the fields of teaching and of agriculture; and perhaps its most direct influence is in the former. As head of the educational system, it exercises a beneficent influence upon all its subordinate branches. It trains a large part of the secondary school teachers, and through the school of education and the office of high school visitor, held since 1902 by H. A. Hollister, it coöperates with the public authorities in determining their standards. The administrative organization of education in Illinois, as in most States, is sadly deficient in centralization; the district as the unit of education was for a long time rarely displaced by the township. Under a law passed in 1911, however, and after attack before the Supreme Court upheld in 1913, the situation is fast improving. This measure makes it possible for the voters to organize a high school in any compact and contiguous territory of over 1,000 inhabitants, even cutting across township lines. A supplementary act provides that high schools receiving students from outside their own district supervision shall, in case these students have no high school of their own, remit their tuition fees and charge the same to the students' home district. The former law has led to the rapid organization of secondary schools where none existed before, there being 263 township high schools in 1916 as against 16 ten years before. The latter has stimulated attendance. The net result is that the University's registration is expected to increase by leaps and bounds, though the entrance requirements were raised again slightly beginning 1916-17; the President believes that within twenty years there will be a thou-

sand accredited schools. The influence of the University on the high schools through its inspections, entrance examinations, and bulletins is of course increasingly powerful. Even the normal schools look to it, for their graduates frequently come to the University to finish.

The moment any Illinois student enters the high school, especially in a small town, his acquaintance with the University begins. He finds the syllabus laid down to meet the University requirements, the teachers in occasional communication with the educational faculty, and the school periodically on parade before the University inspector. Of the schools accredited by the University in 1915, three-fifths were visited that year. He finds the University always ready to advise the authorities on school organization, and the students concerning their plan of study. He finds it conducting a campaign for more township high schools, and holding an annual high school conference which one or more of his teachers may attend. In addition, if his school is doubtfully satisfactory, he finds that the University is taking steps to make certain that the gap between itself and the secondary institution is bridged—that it is outlining a program of new studies, or helping appeal to the community for money to equip a laboratory, or advising with the local Board as to the acquisition of effective teachers.

The visitor and his assistant are responsible not only for the accrediting of schools to the University, but to the North Central Association of Colleges and Secondary Schools; and travel, inspection, and correspondence require all their time. Even where schools cannot be accredited they are helpful, and in 1915 they assisted school authorities in nine counties in standardizing two- and three-year high schools. The office of the visitor has

published a high school manual, or general course of study; a treatise on the township high school, which is used as a campaign text by the State Superintendent and various civic bodies; a treatise on high school buildings and their equipment; and bulletins containing the proceedings of the High School Conference. Another bulletin, for teachers of English in the high schools, is edited by Prof. H. G. Paul of the English department. The University is attempting to extend a new system of agricultural high schools, each with its ten or fifteen acres of farm plots. The autumnal conference has grown from an attendance of 75 in 1905 to nearly 1,300 in 1916, and now carries on its proceeding in thirteen sections. It has accomplished various important tasks: the preparation of syllabi in a score of high school subjects; the recommendation of different methods of high school administration; and the outlining of model curricula for schools of three, four, five, or more teachers. But of greater value are the intangible accomplishments of keeping alive in high school teachers a scientific interest in pedagogy, and of effecting a warmer understanding between the University and the high schools. Practice teaching at the University, which began in 1893 under Prof. McMurry, and was revived more than a decade later by Prof. E. G. Dexter, is now on the point of expanding into a genuine practice school, to be administered by the faculty of the school of education, in consultation with the members of other departments assigned to specific duties in connection with the training of teachers. The new building will give full facilities for this and for publication. In 1914 the State Superintendent authorized an educational survey of the State, and Prof. Lotus D. Coffman undertook its directorship, the University contributing $1,000 to the work.

This survey has furnished a mass of material which can be utilized by graduate students, and has shown that it will be possible for advanced investigators at Urbana to do much in the service of local or State educational authorities.

The work done for the State by the college of agriculture and the agricultural experiment station falls under three general heads: their activities in research, their dissemination of advice and information by correspondence, and their extension teaching through the short course, the lectures of the faculty at institutes, and other agencies. It should be said that there is little of University consciousness in this work and that college and station do not regard themselves as entitled to credit either for altruistic labor or for the originating of many endeavors. The work which they do represents, in general, the response to a demand long ago voiced by the intelligent agricultural population of the State; they did not so much offer themselves as they were chosen by the State as the proper agency. It is not so much that they are performing a certain function for the State as that the State is performing it through them. The same principle applies to practically all the other University divisions which seem to be of general State service. But in the case of the college and station it is particularly clear, for farmers are scattered all over Illinois who show as earnest and scientific an interest in the advancement of their calling as does the faculty at Urbana. The three general activities mentioned are closely connected, for the correspondence and lecturing deal mainly with the subject under investigation.

The chief of the fields of research may be briefly enumerated. An extensive physical and chemical anal-

ysis of the soil of Illinois has been made, dealing with all existing soil types; and at the same time a soil survey has been conducted in two parts. The first, the general State soil survey, which was completed in 1907, shows the fourteen great soil areas of the State, and gives an invoice of the stock of fertility in twenty-five of the main types of soils in these divisions. The second, the detailed soil survey, is taking steps to discover, map, and investigate each different kind of soil on each farm in each county, even down to five-acre lots. These soil investigations are a necessary basis for the adoption of scientific methods of agriculture, and the University believes they have already had important results: the average State yields the last decade having been seven more bushels of corn and three more of wheat than during the quarter-century before the University began (with other factors) to affect agricultural practice. Experiments have been made in crop production, milk production, and meat production, followed by the issuance of bulletins of practical advice. Plants have been improved by selection and crossing; the smuts and insect parasites, scabs and cankers, of plants and fruits have been studied and their treatment discussed; farm roads and buildings have been studied and models described. For the deep cultivation of corn the farmers have been led to substitute shallow, with a consequent saving of millions. Better methods of dairying have been insisted upon. A bulletin comparing the achievements of Rose and Queen, one a University cow that produced butter fat lavishly, the other a cow to all outward appearance as good, but actually worthless, has been distributed by the tens of thousands. Special effort has been made to impress upon the new generation the necessity for attention to the renovation of

land, through the addition of limestone, phosphate, manures, and the rotation of crops so as to include nitrogen-producing plants. An "Illinois system of permanent fertility" has been perfected and is zealously preached to farmers. The Russian thistle and the soy bean are equally favored by treatises. The cause of bitter rot in apples and the means of control have been discovered. Methods of seeding and methods of caring for growing crops are treated in a score of the 325 bulletins which, by the end of 1914, the University had published. To describe even the main divisions in the entire list, in which Miss Bevier's household science department is well represented, would be wearisome.

The correspondence of the college and station long ago passed 100,000 letters annually. These present questions of all sorts, from requests for confidential information as to patentable articles to advice on stock feeding; most are on land treatment. In general, the inquiries show a high degree of ability and discrimination, and while the answering of them is a laborious task, it doubtless has a very direct influence upon the agricultural progress of the State. It is usually the interested and energetic farmer who takes the trouble to write to Urbana. "No matter how absurd the letter," says Dean Davenport, "the custom is always to make a serious answer. . . . The experiment station never writes an angry or insulting letter, and the result is that it is a rare thing to receive a communication showing real irritation. . . . The most frequent cause of complaint is in not receiving the bulletins. A farmer has frequently said to me, 'Why are you no longer sending me your bulletins?' and then in the next breath he would begin discussing the last bulletin issued. I have discovered an almost universal impression that

these bulletins are issued regularly, whereas they are not." Another difficulty is with individuals who ask for a species of information that cannot be given without investigation of their own peculiar conditions. A man will inquire if he cannot have his soil analyzed, for example, and must be told that the composition of his soil is reported, or will be reported, in the soil report for his county; that the University cannot delay its systematic investigations of the soil of the State to make analyses of miscellaneous non-representative samples.

The college also carries on a small press service. Formerly page matter was prepared for use by the syndicates which distribute plate matter to the small newspapers, and a university news bureau still sends brief reports of matters concerning college and station to all papers within the State. There is a limited service in the preparation of careful and extended articles for special periodicals, as dairy articles for the dairy press, and some of these have even seen publication in the French and German agricultural press. The purpose of the lectures and articles as a whole is to concentrate attention on a half dozen of the chief principles laid down by the University for the improvement of farming, and to iterate them till they are adopted. The results of this are evident in that the farmers of whole counties now no longer need emphasis upon the more elementary facts—those of certain central counties, for example, now universally treat seed-oats for smut-prevention.

The scope of the extension activities of the college is evident from the fact that at the demonstration schools over the State of which mention has been made a total of perhaps 10,000 annually receive instruction; that 50,000 hear University speakers at the farmers' insti-

tutes, and that 2,000 men and women are attracted to the Short Course—in one case a farmer having attended with thirty-two of his tenants. And in 1914 the Smith-Lever Act, a new Federal law, made available in Illinois, for experiment work in agriculture and household economics, over $23,000 in 1915, over $36,000 in 1916, and thence in increasing amounts to over $175,000 in 1924 and every year thereafter. County advisors are located in the various counties as fast as local organizations can be formed to support their work, and county funds raised for their partial remuneration. Demonstrators, including a number representing the household science department, have been appointed to act as special advisors to the county agents and to associations of farmers. What is awkwardly called " coöperative farm management demonstration work " has been undertaken under one traveling director, whose duties are to confer with the farmers upon the advantages of coöperative effort. Finally, girls' and boys' clubs in farming and household science are being organized, with an eye to putting into the work of children an interest and breadth never there before. There was a just fear when the Smith-Lever bill was passed that its funds, huge in the aggregate, might be wasted; it is now evident that in States like Illinois the Federal moneys could be put to no better purpose. The University for a time formally assisted in the execution of the Act under articles of cooperation with the Federal Department of Agriculture, but in its insistence upon freedom from an interference offensive to academic officers has severed those relations.

The engineering experiment station, the first to be established in America in connection with a university, has been devoted to problems of general and not mere State interest; most of its achievements have been at

the service of the engineering profession of the whole world. One notable investigation in fuels, however, has especially improved the use of Illinois coal. The station has shown not only how to get the greatest heat out of the bituminous products of the great fields in the southern part of the State, but has demonstrated that practicable coking processes will make it like anthracite, burning with little or no smoke. The chemical experiments here have been carried farther than anywhere else in the world; and a notable sight at the University is still the furnace into which is dumped the soft black coal out of which Chicago and Pittsburg produce blinding fogs, and which here burns with clear heat. Studies have been made of the effects of weathering, washing, and storage of such coal, and of its utilization in gas-making. The civil engineering department has also made studies of rural roads especially valuable for Illinois. But the investigations of materials used in engineering construction, and especially of the strength and properties of reënforced concrete, the study of which was begun when the station was established in 1904, have been available to the industrial world at large, and have been the basis of the subsequent design of concrete structures by engineers all over Europe and America. The huge materials testing machines of the University, now housed in a large special building, have been constantly engaged for thirteen years in breaking, crushing, or straining pillars of concrete, brick, wood, or steel, in search of important engineering principles. So, too, with the studies in heat transmission, of the strength of welds in steel, and of different materials used in electric filaments, which have been useful not merely in Illinois, or the United States, but abroad.

In railway engineering, a locomotive of any size may be mounted in the locomotive laboratory in such manner as to permit it to be operated under any desired condition of load or speed. Testing a wide range of locomotives, the University now has records complete enough to make possible an accurate estimate of the performance of any standard type in respect of fuel consumption, speed, tractive effort, and so on. The railway department also has a dynamometer car for the study of the effect of varying conditions upon rolling stock, much used by New York City when electrification was undertaken there, and an electric test car. The mining laboratory is completely equipped, and has solved many problems for both miners and operators. In electrical lines investigations have been made of such popular subjects as street and rural home lighting, and recently a new alloy, consisting of iron and silicon, has been discovered and upon refinement found to possess great value in the manufacture of transformers and dynamos. A study and analysis of the thermal properties of steam has been completed under Prof. G. A. Goodenough, and from a huge volume of facts has been formulated a "steam table" of far greater accuracy than any before known; this has proved of much assistance to engine designers and engineers, and has evoked congratulatory addresses from German authorities hitherto leading in the field. A highly useful law governing the relation between the expansion curve drawn by a steam engine indicator and the economic performance of the engine has been discovered by a research fellow. The wind-stresses in large buildings have been studied, and the mortar-making qualities of native sands. The investigations of the station are now being pushed by a very large and competent staff: ten research professors and assistants, and

fifteen research fellows, devote their entire time to experimental work, while of course all faculty members of the college of engineering are directly interested in it. Results of more than a hundred successful and significant investigations have been published—failures are not recorded—and a dozen more are in progress. Arrangements have been made by which three sets of experiments are now being carried on with the assistance and partial financial support of as many outside bodies: the Association of Manufacturers of Chilled Car Wheels, a large coal company of the South, and the International Railway Fuel Association.

With the extra-educational work in engineering and agriculture is closely related that of some of the scientific departments. A number of bulletins, prepared by workers in chemistry, have dealt with the effect of weather on Illinois coals, and methods of preventing loss in exposed coal. Prof. Parr's calorimeter has become invaluable to buyers of coal on a large scale. But special mention is merited by the work the department of physiological chemistry has done, in part in conjunction with the college of agriculture, upon the nutrition of man and the lower animals. During 1907-08 a nutrition club of twenty-four physically sound students was formed under Prof. Grindley and housed in two buildings with matron and chef. An extensive study was made during the next year of the foods used, the waste products, and the effects upon the subjects—a corps of thirty men of scientific knowledge and experience being employed on the task. The primary purpose was to reveal the effects upon man of saltpeter when used as a preservative of meats; but many incidental investigations of interest to physicians, clinicians, pathologists, bacteriologists, and biological chemists were made, cov-

ering both the normal and the abnormal activities of the club members. Sufficient preliminary work had already been done in the field of nutrition, with encouragement from the Department of Agriculture, to make certain the pursuit of the most significant lines of research. For the expenses of this unprecedentedly large and careful study the American Meat Packers' Association appropriated $50,000, and the University set aside generous sums. A huge mass of material was collected, and slowly interpreted. By the spring of 1910 thirty-eight separate papers on the investigations had been published, many both in scientific publications and in bulletin form. By the end of 1912 three volumes of 500 pages each had been brought forth, and data remained to fill three or four volumes more. In the editing of these results the University had the coöperation of an advisory board of faculty members of Yale, Harvard, the University of Chicago, and Washington University.

The most important results established by these nutrition investigations, which are being continued, can here be stated but briefly. The surprising fact was shown, and abundantly confirmed, that nitrates are formed in the human organism. It was shown that there are significant seasonal variations in many of the nutritional processes of man. The influence of different classes of food upon human health was demonstrated, and a series of sound rations arrived at. It was proved that the cheaper cuts of meat are, when properly prepared, just as wholesome and nutritious as the more expensive. A precise method of roasting meats, by which they were given the utmost palatability, digestibility, and nutritious value, was perfected, and the results embodied in a fireless cooker. The nutrition of man in disease was studied, and model diets formulated.

The nutrition laboratory also conducted experiments upon the influence of different kinds of feeding-stuffs upon the growth, fattening, and nutrition of beef cattle, swine, and lambs, and established the best rations for such animals—the agricultural experiment station publishing these results. The chief conclusions obtained were that steers might be fattened upon a very low protein ration, and that the greater the amount of food furnished, the lower was the coefficient of digestibility. Finally, the laboratory was engaged to assist the Pellagra Commission appointed by Gov. Deneen, on which the University was well represented; and after study of the dietary of the inmates of the various State institutions, it showed that it was wanting in animal foods, and that more fresh fruits and vegetables should be offered for their mineral elements. In short, the meat trade, the housewives, and the live stock producers especially of Illinois, and the medical men and chemists of the whole country, have been directly benefited by the study.

The State offices connected with the University, which use its equipment and the time of some of its faculty, are an integral part of its extension work. The State Entomologist, whose post was permanently established at Urbana in 1899 by a law requiring the University to provide laboratory and office, is expected to investigate all dangerous insects, to inspect and certify annually all nurseries and importations of nursery stock in the State, and to maintain a general watch over its horticultural interests. Experiments carried through many years upon the repression of chinch bugs have helped materially in establishing the methods now accepted. So, also, the office has been useful in discovering or promoting methods of destroying the Hessian fly and corn-

root aphis, of spraying orchards for the codling moth and plum curculio, and of treating the San José scale with lime-sulphur. The State Water Survey, in addition to activities before mentioned, has carried on experiments with boiler water, has treated reservoirs for algæ and other water taints, and has advised with manufacturing companies on the harmfulness of their discharges into streams—in some cases finding new uses for by-products. The State Geological Survey, which was not founded for nearly three-quarters of a century after the first such body in America, has been attempting to atone for lost time in a rapid exploration of the mineral resources of Illinois. In conjunction with the mining engineering department and the Federal Bureau of Mines it has charted the various coal fields and seams of the State and analyzed the coal from each, while it is now studying various geological phenomena incident to mining. The Fuel Conference of 1909 revealed, Dean Goss reported, "the development of a strong feeling favorable to the adoption of more scientific methods in the further development of the mining properties of the State." Coöperating with the ceramics department, again, it has determined that a number of the common clays of Illinois have ceramic value, and has prepared reports upon the deposits of materials for cement.

A decade ago the State Laboratory of Natural History had in hand three principal enterprises—the completion of the report on Illinois fishes, a systematic survey of the bird life of the State, and a study of the plant and animal life of peculiar regions, as the bog area of the north, or the sand dunes of the lake shore. These have all been finished or pushed well to completion. Since then operations have been devoted to two other main ends. The forestry resources of the State have been

carefully surveyed, in coöperation with the Federal Government; and a biological survey has been made of the Illinois River with special attention to economic aims. The Illinois is one of the few important fishing waters in the country, and one of the most productive in the world—its yield amounting to over a million dollars yearly. The environment of the stream has undergone a rapid change in recent years, the bottom lands having been largely reclaimed, the cities on its banks having filled with manufactories threatening its purity, and the drainage canal of the Sanitary District of Chicago having brought into it an enormous load of Chicago sewage diluted by a large additional flow from Lake Michigan. To keep its yield of fishes at the maximum is one object of a prolonged survey which Dr. Forbes is carrying on. But his office has also published, in the ten volumes and scores of miscellaneous papers issued up to 1914, much unconnected with these general topics.

The bacteriological department was employed from 1911 to 1914 by the Illinois Canners' Association for an investigation of problems in the canning industry, carried on with a contribution of $1,000 annually by the Association. The ceramics department has devised a method for preheating Illinois clays formerly regarded as worthless, so that they may be used in the manufacture of high-grade building brick. It has shown the possibility of replacing tin, in the manufacture of white glazed stoneware, with a cheaper magnesia. It has discovered the method of compounding glazes, hitherto a trade secret, designed a new viscosimeter to measure the plasticity of clays, and constructed the first kiln for high-temperature gases which is a success in giving control of temperature. The department of mining engineering, again, recently opened a large field of usefulness



MAIN ENTRANCE TO LINCOLN HALL

in the Miners' and Mechanics' Institutes. The program of these Institutes included a two years' extension course to be offered at mining centers, to enable untrained men to become mine inspectors, managers, and hoisting engineers; short courses of six and two weeks each at the University, to help all those connected with mining to keep abreast of the times; unit courses to be given in special mining districts; and a large number of minor activities—the organization of local institutes, the maintenance of a Questions and Answers office, the organization of evening classes for men employed by day in the mines, and the offering of general instruction to ill-educated miners who have recently come to America. The Institutes were a most promising instrument for the enlightenment of scores of thousands who find their support in the coal fields of southern Illinois, and it is to be hoped that the political action at Springfield which cut short their existence may soon be reconsidered.

In the college of liberal arts and sciences one of the largest services has been performed by the department of history, under Professors Greene and Alvord, to which is largely due the fact that Illinois, ten years ago a laggard in the historical field, now leads her sister States of the Middle West. The beginnings of real historical study in the State were made when in 1905 the Trustees of the State Historical Library—which had not been founded until 1889, and had published its first volume only in 1903—sent Prof. Alvord to examine an old French document which was reported to be in the courthouse of St. Clair County at Belleville. Prof. Alvord found not only this, but a large number of other and more important eighteenth century documents, which especially illustrated the history of Illinois during the British dominion and the American Revolution.

They were all that had been preserved of the records of Cahokia, one of the earliest settlements within the State's present borders. So impressed was the Library that in the autumn an advisory commission of professors of history in six of the leading colleges and normal schools of the State was formed under Prof. Greene, and a plan for the publication of historical materials in series was adopted. Shortly afterwards, Prof. Alvord was given general editorial supervision of the Illinois Historical Collections, as the series were to be called.

Under Prof. Alvord's direction, volumes II to XII, inclusive, of the Collections were published in the nine years following 1907, thirteen more were brought into active preparation, and plans were made for others. Another important discovery, that of the records of the old French settlement at Kaskaskia, was made by Prof. Alvord in the courthouse of Randolph County at Chester, and a third in the papers of Pierre Menard at Fort Gage. Volumes II and V of the Collections contain these "Cahokia Records," and "Kaskaskia Records," edited by Alvord, and volumes X and XI, documents on "British Illinois," edited by him and C. E. Carter. Prof. Greene, Prof. Alvord, and Dr. C. M. Thompson have edited the Governors' Letter-Books from 1818 to 1853; Prof. Scott a bibliography of newspapers and periodicals in Illinois, 1814-1879; Dr. S. J. Buck, formerly of the University, a bibliography of travel and description, 1765-1865; Dr. T. C. Pease a volume on County Archives; and other men other units in the Collections. All this work was greatly stimulated when in 1909 the University organized the Illinois Historical Survey under Prof. Alvord as a department of the graduate school, to facilitate research and to encourage the writing of monographs in Illinois history. The

most important undertaking of the Survey has been the compilation of a five-volume history of the State, under the editorship of Prof. Alvord, as a memorial to mark the centenary (1918) of admission to Statehood. Funds have been voted by the Legislature, and the work is to be published by the Illinois Centennial Commission, created by it. The volume on Illinois as province and territory has been assigned to Prof. Alvord, that on the frontier State, to 1848, to Dr. Pease, that on the transitional era of the Civil War to Dr. Arthur Cole; that on the period of industrial development, from 1870 to 1893, to Prof. Bogart and Dr. Pease; and the final one on the modern commonwealth to Prof. Bogart and Prof. J. M. Mathews. The Survey and the workers on the centennial history, laboring winter and summer, employ a staff of twelve graduate assistants and a large office force; they have made a thorough search for all useful materials in newspaper files, in county archives, in local libraries, in private collections, have photographed thousands of documents in Washington, and have hired expert workers in foreign capitals. All these materials are being handled in such manner that the completion of the centennial history will leave the University with the most valuable set of local records in the West.

There remain to be mentioned a large number of miscellaneous services to the State by University departments and officers. For two years Dean Goss was employed in Chicago by a committee of the Association of Commerce to direct investigative work upon smoke abatement and the electrification of the terminals. At the same time, Prof. Fairlie was serving as director of a legislative committee on economy and efficiency in the State government. In 1914 President James appointed two representatives to a committee, which included men

from Northwestern and Chicago Universities, to prepare material of use to the State if it called a constitutional convention. Prof. Fairlie and Prof. Garner have established an office of municipal research. Dean Kinley has served as a member of the Industrial Insurance Commission and the State Tax Commission. Wilhelm Miller, while head of the landscape gardening courses, converted hundreds of farmers to a conscious effort at the beautification of their holdings—and beautification not with foreign trees and bushes but with those indigenous to Illinois and suitable to the horizontal lines of the prairie. The President of the University himself, besides serving on various temporary committees, was for fifteen years the president of the Illinois State Historical Library Board, under whose direction the development of the work in State history received its initial impetus. He was also for seven years the president of the State Highway Commission, which began the recent work of modern highway improvement and road building. As secretary and executive officer of the State Tax Commission, he guided the thorough investigation into the tax system of the State which resulted in the proposal of various reforms, some of which were adopted by the Legislature. Above all, various important conferences on public questions have been held at the University in recent years. Thus in 1913 the Commerce Building was dedicated with a conference on business progress attended by many business men; and a year later a conference on life insurance and its educational relations was held on the occasion of the presentation of the portrait of an insurance leader. At the installation of Dean Goss in 1908 a number of men eminent in engineering fields appeared, and joined in a virtual conference on graduate research in engineer-

ing. The conference on railway problems and that on animal tuberculosis have been noted. Two annual drainage conferences have been held, for in Illinois there are great overflow areas of rich lowlands along the rivers, the reclamation of which would add $150,000,000 to the State wealth; and the college of engineering is eager to arouse interest in drainage problems.

Since the University appointed a Community Advisor three years ago, it has appealed directly to scores of towns and villages to make themselves more attractive to their inhabitants. The ugliness of many small prairie centers, with unkempt streets, ramshackle business districts, few shade trees or lawns, and no expressions of community feeling beyond a town hall, a "calaboose," and a few lodges, is patent to every traveler. Dr. Hieronymus has traveled throughout the State, attempting in some places to form a new organization for local improvement, in most sensibly employing some organization already at hand—a commercial, a social, an educational, or even a religious body. One town is urged to build a library, another to preserve the building in which Dickens or Lincoln slept, or the log house of its first settler; a third to arrange for a township high school; a fourth to acquire a park; practically all to better their appearance by the planting of shrubbery, the designing of flower beds, and the systematic trimming of trees. Wisconsin led in this work when she obtained the originator of the social center idea from Rochester, New York; Illinois is making a good second. An annual Better Community Conference is held at the University, and a comprehensive program of community improvement has been proposed in connection with the centennial celebration.

It is evident from its position that the University,

even while laying all possible emphasis upon its purely academic functions, will have more and more to increase those which extend general benefits to the State. The road of extension service is bound to broaden with great rapidity. To teach a community to look to the University for assistance in one field is to lead it, in time, to require it in many. The State, which had a population of two and a half millions when the University was founded, now numbers more than six million people. With a quarter-million farms, with a production of corn alone approaching $200,000,000 annually, it is one of the three or four most important agricultural States in the Union. The only agricultural courses of any consequence are those given at the University, the chief extension activities to which the two and a quarter-million people resident on the farms can look emanate from Urbana. But the State is also the most important manufacturing commonwealth west of the Alleghenies, producing nearly one-tenth of the manufactured products of the Union. More than a half million persons are actual wage earners in manufacturing establishments. In mining, over 60,000,000 tons of coal have been produced in a single year. The primacy of the State in railway traffic is well known. All these industries, and all the professional activities of the State, have found their reflection in courses of training at the State University, and are certain to find more direct bonds with the institution than through their absorption of its graduates. It will have to undertake new investigations for them, to increase the efficiency of the rank and file who cannot attend college, to become a center for the conventions and conferences of their leaders, and to act as their agents in communication with each other and as their inspiration in new progress.

X

CONCLUSION

The Position of the State University. Safeguards at Illinois Against Its Characteristic Dangers. The New Era Opened by the Mill Tax Act. The Deficiencies of the University and Means of Repairing Them. Future Relations Between University and State.

In a facile way, the State universities have always been warned of four dangers to which their public nature and their innate tendencies expose them. It has been supposed they are in constant danger of drifting out on the uncertain sea of State politics, and that their administration must therefore always be slightly precarious. They have been accused of suffering from superficiality and a rage for numbers, leading to unwise or premature expansion. Their "elder sisters, haughty peers," have insinuated that in their boast of their identity with the democratic movement towards more of sweetness and light is reflected a tendency to take themselves too seriously as leaders. Finally, it is urged against them that they are dominated almost exclusively by utilitarian ideals, and that the atmosphere of student thought, the curriculum, and the attitude of the faculty all encourage the practical as distinguished from the cultural. The University of Illinois, it is unnecessary to say, has at times been sharply stung by each of these reflections upon the class of institutions to which it belongs. In 1911, in his commencement address, President

James offered some remarks upon them in a defense of university education as a whole; two years later Prof. Sherman published a more elaborate defense; and these utterances have only been symptomatic of much questioning and thought on the subject, just as the utterances of Prof. E. A. Ross, Mr. Pritchett, and Presidents Vincent and Van Hise in defense of the State University have been symptomatic of a general Middle Western stirring in its behalf.

The first of these questions is one of fairly determinable fact; and it is clear that as regards Illinois no one at the University or in the State is apprehensive lest political currents unduly affect the institution. The State has moved beyond the stage at which, as in Oklahoma, the Trustees could wantonly turn out the President and the best faculty men to replace them with arbitrary appointments; or as in Florida, political pressure and the desire for size could drive out an excellent President against the wishes of Trustees and faculty; or as in Kentucky, a President of fine training and intellectual grasp could be replaced by a petty politician. A virile and sensitive public opinion has been developed, and several recent incidents have made it plain that when fully aroused there is no one at Springfield or elsewhere who could stand against it. The University is adequately protected, for one thing, by the 20,000 of its former students scattered, in large part in positions of influence, from Chicago to Cairo; for another by the hundreds of thousands of farmers and others directly benefited by it; for still another, by a press which has come to take a pride in it; and finally, by the influence of the two other great universities in Illinois, naturally jealous of the academic position. When early in 1914 a dissension

in the Board of Trustees threatened the place of President James, and he left the question of his going or staying to the faculty vote which unanimously sustained him, public impatience with any attempt by the Trustees to interfere on political grounds with the University was forcibly expressed. "If we know the conditions of our own well-being," said the Chicago *Tribune,* "if we understand and honor the principles and ideals of our country, we shall guard jealously the freedom of our schools, and we shall punish swiftly and certainly any man or interest which attacks that freedom." Gov. Dunne wrote the President that "politics must not enter into consideration of the University, and whatever may be our affiliation with political parties, they should be forgotten in the execution of our business as Trustees of the University." Only meddling by the University in politics could invite the meddling of politics in the University, and the former everyone at the institution is eager to avoid—President James in 1916 offering as one reason for declining to run for the Governorship his belief that no one should regard the post he occupied as a stepping stone to State preferment.

That the University has been proud of large numbers, that it has even had faculty members who have confounded bigness and greatness, cannot be denied. In extenuation it can be pleaded that it once had to appeal for legislative support on the ground of its size. Certainly it had never exaggerated its numbers even for this purpose, after the fashion of the Kansas farmer who advertised thirty-two head of stock, which on examination were found to consist of two cows, two horses, and twenty-eight hens. Moreover, it has tried to appeal to the imagination of the State, and its faith in the future has been of the sort that justifies itself. When

the architect was ordered to plan for a total registration of ten thousand in the near future, when the librarian was asked to plan for millions of volumes, when President James has spoken of making Urbana the intellectual center of the Middle West, when he has offered the opinion that in two decades the School of Commerce might well have 2,000 students, it meant simply that the University was at once expressing a hope and making ready for a possibility. It has tried to rouse the commonwealth to the vision of a university which will give a college education not to the fortunate few but to the huge numbers of the genuinely ambitious and capable; and it has never been able to get the State to make provision more rapidly than the occasion demanded. The two great crimes which a university can commit in its zeal for size are against the high schools whose pupils it accepts with insufficient preparation, and against men attracted by advertisements of courses which it gives in inadequate fashion. Since its first years it has urged the secondary schools of Illinois towards higher standards as fast as circumstances would permit. It was once guilty of the second fault in connection with its medical college, but it paid for its error, and in no other department has it failed to redeem its promises.

The accusation that the State University takes itself too seriously as a leader must be countered at an institution like Illinois by the assertion that to do so is impossible—that its natural function is that of leader, and it cannot too thoroughly fulfill it. The difference in the point of view of most young and most old institutions in this matter is natural, and it is unnecessary to condemn either. A long-established, endowed university builds with the greatest care; it develops its depart-

ments and functions slowly, and refuses experiments which would impair its prestige; it has been decades in winning a secure place in many fields, and it does not believe that a great departmental work can be built up except on the firmest basis. Columbia University, offered support by the business men of New York in establishing a school of business, waited for over a decade because of her belief that the field of such a school was imperfectly outlined, the curriculum too vaguely defined, the uncertainties of its reaction on the older courses still too numerous. Illinois rushed precipitately into the establishment of a school of commerce, content to develop her own methods and establish her own following, and accepting without question the necessity, forced upon her by her environment, of making the school an undergraduate rather than an advanced one like Dartmouth's, or a graduate one like Harvard's. The State University lays itself open to mistakes, temporarily damaging to itself and perhaps injurious also to small bodies of students involved in these experiments. But so much practical foresight goes into all the ventures of the sort at Illinois that mistakes will be small and very rare; while the youthful communities of the Middle West need just this emphasis on opportunity and expediency. The law school, the music school, the graduate school, were all for a time avowedly weak. The University admitted that they were not yet upon their feet, kept them open for those who had no better place to go and who could not therefore legitimately complain, and in time so interested the State that they were made at first respectable and then vigorous. Such a policy was necessary in order to teach the State that law, music, and graduate work could profitably be offered at Urbana; without such leadership

the democracy would never have appropriated money for them. The success of some new ventures, as that in ceramics, has been instant and amazing; that of others, as the mining and railway courses, still hangs in the balance. Universities that depend on private philanthropists can often wring from private sources a gift huge enough to guarantee a firm foundation for a novel departure from the start; popular communities cannot thus be approached. It may be galling to old institutions to see headstrong young neighbors rush into enterprises at which they, with all their strength and purposefulness, hesitate, but the young neighbors are following the proper course.

Since the passage of the mill tax act there need be no new developments planned at Illinois upon hazardously small resources. Despite some difficulties inherent in the operation of the law, it will now be possible for the University to accumulate a reserve fund preparatory to any new venture; and the certainty of the financial future will permit of planning upon more permanent lines from the beginning. The provisional period of immature growth can be shortened. At the same time, Illinois and its neighbors will never lose the boldness of policy that has characterized them, and the University will always feel that service to the community impels it to the exploration of new educational fields. President James, following Altgeld and Draper, asserted long ago that it should be so comprehensive that no son or daughter of the State should have to leave her borders for training. The present limitations of the University, the steady expansion of educational horizons, will make it impossible to act upon this principle without a consistently progressive plan of action. The State University cannot be held within narrow limits of tradi-

tional cultural development, but must keep itself in the forefront of the State's advancing economic and social life, with which the State's culture, in the broadest sense, must always be bound up.

President James's reference to the charge that the State University in general, and Illinois in particular, is wanting in intellectual enthusiasms and cultural ideals, addressed to the new-made alumni, embodied a questioning appeal. "A gentleman told me not long ago that he would not send his son to a State University because while he believed it was efficient in its own way, it emphasized the wrong things. It aims to fit men to make a living, instead of to live. It begets all those undesirable qualities which are bound to grow up in such an environment. . . . My friends, you know more about some aspects of this than I do, or than the members of the faculty. You know whether low ideals . . . prevail among members of the student body. You know whether you or your fellows are willing to descend to improper means to accomplish their ends. You know what attitude the average student has towards the institution and the State. . . . You know whether there is any real truth in any of these charges. Now all I can ask is, if they are true, then . . . help us, so far as the weight of your influence as alumni goes, to get rid of them." But that the charge has been greatly exaggerated neither he nor anyone else has felt a moment's doubt. The University is better developed on its technical and industrial sides than on its cultural; its students are in general brought from homes with less leisure and with more practical aims than those of older parts of the country, and they are less interested in pure learning than the homogenous undergraduates of some colleges of the liberal arts. But the one-sidedness

of the institution is being fast corrected, and it is to be doubted if the student body differs essentially from those of Eastern universities. The definitely cultural branches are by no means neglected, the vocational branches are surrounded with as cultural an atmosphere as possible, the University cherishes its idealism in its own way, and the average student emerges with an interest in intellectual things different in kind, but not in degree, from that of the East.

The only ground for believing in an inherent deficiency of culture in the State University would lie in some opposition between the democratic ideal and the intellectual ideal; and the only believers in that opposition are those who are ignorant of the deeper sentiment of the people of the West. The foundation the University has already laid for cultural training of the best sort is broad and substantial. As several observers have pointed out, it is inspiring to see the practical idealism disseminated by a State University like Illinois working as a leaven in the social lump. The young lawyers, engineers, and business men emerge from their classes expert, clear-headed, and honest, to confront the muddler, wastrel, and grafter; the farmers are scattered over the State to make lonely countrysides social in the best sense, attractive to live in, and productive beyond the dreams of the older generation; the girls of the University plunge into social settlements, the work of organized charities, and rural community labors in a fashion thoroughly characteristic of the West. The technical talent of the University is employed through both alumni and faculty to give to those who a generation ago were easily exploiting natural wealth a new conception of their responsibilities and opportunities; the University is softening the individualism of post-pioneer days, and

accomplishing the socialization of legislation; it is eager to assist an eager generation to comprehend more of art, literature, and the finer things of life. It is helping teach the democracy to stand on its own feet, make its own way, and obtain whatever its enthusiasm and judgment teach it is desirable.

The high school and the State University as naturally go together as do the expensive preparatory school and the expensive endowed university; and it is no less absurd to say that the high school is necessarily inferior to the preparatory school than to say that the State University is inferior to the endowed college. As Prof. Sherman remarks, the problem is in part one of financial means based on popular determination. "It is absurd to assert that the united will and means of two or three million citizens cannot compete successfully with the sporadic generosity of two or three score of private individuals. It is absurd to declare that a great commonwealth cannot afford at its university a liberal arts college of absolutely first class. . . . To speak in the brutal language of the market, we have yet to hear that a high-grade professor of philosophy is a dearer commodity than a high-grade professor of civil engineering, or a high-grade instructor in classics than a high-grade instructor in manual arts. The higher and the lower technical education which have already been provided are not less, but more, costly than equivalent provision for the humanities. It is equally absurd that the support of the people cannot be organized except for material interests and self-regarding ends; in the humblest walks, as history blazons, it can be organized for the adoration of God and the recovery of the Holy Sepulcher." Granted that the lack of the traditions and surroundings of a more highly organized society than that

of the West may hamper the efforts of Illinois to build up a well-rounded strength, granted that the supply of high-grade university teachers is inadequate to the demand and that an institution must have reputation and an atmosphere of scholarly emulation as well as money to attract some men, it is still possible for Illinois slowly to overcome all handicaps.

Within sight of the towers of the University, in the farming country to the south, stands a familiar old schoolhouse which was built at much the same time as University Hall, and which, battered, ill-designed, and cramped, expresses fairly well the crudity of public education in Illinois in the days of Newton Bateman and John M. Gregory, for it is the type of the general schoolhouse of that time. To look at it is to appreciate the poverty and bareness out of which the people of Illinois had to build their educational structure, and to turn from it to the towers is to appreciate better the proportions and strength of this structure as it is now crowned in the University. In forty-nine years the State has raised in these corn fields an institution impressive in itself and for what it stands. Many doubtless regarded Turner and his fellows as visionary when they tried to picture the fruits of the educational scheme that Douglas thought one of the grandest that had occurred to any man. Yet Turner himself, even had he known the University would pursue broader lines than those he had planned for it, would hardly have believed that in a half-century some eight hundred men would be teaching in its sixty halls; that to it would be drawn seven thousand students yearly, trained in an elaborate school system to which the University contributed much; that its extension activities would reach to every community

and would influence not merely the "industrial" callings but most others in Illinois. None of the shortcomings or discouragements of the University can daunt it in the face of its history.

APPENDIX

APPENDIX A

GROWTH OF UNIVERSITY BY YEARS

Year	Faculty	Students		Degrees		Books	Buildings	Biennial income
		Urbana	Total, Urbana and Chicago	Urbana	Total, Urbana and Chicago			
1867-68	4	77					1	$ 72,753.85
1868-69	11	128				1,092	1	
1869-70	19	180				3,646	1	133,278.72
1870-71	19	278				4,588	1	
1871-72	24	381		20		7,307	1	163,102.47
1872-73	25	400		14		8,427	2	
1873-74	25	406		19		10,000	3	123,459.30
1874-75	30	373		37			3	
1875-76	27	386		28			3	183,870.11
1876-77	36	388		41			3	
1877-78	29	377		42			4	170,999.43
1878-79	33	416		23			4	
1879-80	30	434		25		12,550	3	133,088.89
1880-81	28	379		46			3	
1881-82	26	352		34		13,510	3	129,620.63
1882-83	24	382		36			3	
1883-84	25	330		42		14,000	3	141,032.79
1884-85	27	362		45			3	
1885-86	29	332		37		15,300	3	149,077.77
1886-87	29	343		30			3	
1887-88	29	377		34		17,288	3	180,959.97
1888-89	30	418		26			3	
1889-90	32	469		43		19,000	3	237,178.23
1890-91	39	519		49			3	
1891-92	43	583		42		21,216	4	359,144.14
1892-93	48	714		65			4	
1893-94	67	718		69			5	491,940.55
1894-95	80	810		74		27,750	6	
1895-96	84	855		82		28,200	9	594,938.40
1896-97	170	878	1,059	95	137	30,100	12	
1897-98	184	1,034	1,582	89	232	36,990	13	607,632.00
1898-99	194	1,152	1,824	110	265	41,678	12	
1899-1900	229	1,531	2,260	153	328	44,502	13	947,486.98
1900-01	242	1,709	2,564	174	388	47,074	15	
1901-02	279	2,020	3,016	183	484	52,717	18	1,363,716.08
1902-03	316	2,342	3,381	229	525	57,594	18	
1903-04	351	2,674	3,716	312	677	66,639	19	1,814,863.78
1904-05	350	2,779	3,786	295	616	74,326	27	
1905-06	408	3,225	4,107	313	618	83,136	27	2,166,372.29
1906-07	442	3,577	4,341	390	608	95,946	28	
1907-08	472	3,959	4,770	408	721	108,283	32	3,102,761.42
1908-09	497	4,141	4,996	568	799	127,106	33	
1909-10	538	4,323	5,131	584	766	157,836	35	3,199,832.34
1910-11	555	4,401	5,217	602	792	180,371	36	
1911-12	583	4,340	5,200	646	856	209,529	44	4,294,952.88
1912-13	587	4,369	5,096	682	745	233,586	46	
1913-14	704	4,766	5,560	851	1,032	262,926	47	5,622,928.87
1914-15	739	5,446	6,004	814	983	300,592	53	
1915-16	762	6,298	6,437	932‖	1,126‖	330,895	60	6,200,000.00
1916-17	840	6,759	6,828*			379,045†	60‡	

* February 21, 1917. †In addition March 1, 1917, there were 89,351 pamphlets; 4,072 pieces of sheet music; 3,180 maps, and in the libraries of the College of Medicine and School of Pharmacy in Chicago, 21,197 volumes; 4,150 pamphlets; and 8 maps. In addition to these catalogued pamphlets, are a great many unclassified pamphlets, circulars, traveling guides and catalogues. ‡Four additional buildings in Chicago; 51 of these 64 buildings have a valuation in excess of $5,000. Figures as at March 1, 1917. ‖The total number of degrees conferred in Urbana is 9,433; in Urbana and Chicago, 13,701, up to June, 1916.

APPENDIX B

BUILDINGS—1868-1916

Buildings Begun Under Regents Gregory and Peabody

Drill Hall, authorized April, 1871, dedicated October 13, 1872; cost, including mechanical shop, workshop, and furnishings, $25,000. *University Hall,* authorized June, 1871, corner stone laid September 13, 1872; completed 1873 at contract cost of $113,954 (Bd. Minutes, 1870, p. 129), permanent additions made to value of $5,670.62, total cost $150,000. *Chemical Laboratory,* later *Law Building,* authorized September, 1877, completed 1878, repaired 1902; contract cost $23,896, permanent additions made 1910 to value of $23,700, total cost $47,596. *Old Armory,* successively called *New Drill Hall, Military Hall,* and *Armory,* authorized June, 1889, dedicated June 11, 1890; cost by contract (appropriation $10,000, $4,037.05 added to complete, and Dean Ricker given $350 for services) $15,220.29, permanent additions made to value of $4,969 (Bd. Minutes, 1892, p. 36), total cost $20,189.43. *Natural History Building,* authorized December, 1890, corner stone laid March 9, 1892; cost by contract $58,519.50, total cost $70,000 (see *New Natural History Building,* below).

Buildings Begun Under Acting Regent Burrill and President Draper

Power Plant (old), authorized December, 1892, erected 1897-1902; contract cost, with equipment, service mains, etc., $87,500, permanent additions made to value of $8,000, total cost $95,500. *Engineering Building,* authorized October, 1893, dedicated November 15, 1894, occupied January, 1895; contract cost $121,396, total cost $160,000. *Metal Shops,* authorized and erected 1895; total cost $20,000. *President's House,* authorized December, 1895, erected 1896; contract cost $5,000 (appropriated by legislature), total cost $15,000. *Observatory,* authorized and erected 1896; contract cost $6,654, total cost $15,000. *Electrical Laboratory,* erected 1897; total cost $40,000. *Library,* authorized May, 1896, erected 1897; contract cost $131,000 (not including $9,500 in fixtures and $4,952 in plumbing and heating), permanent additions made to value of $31,305, total cost (without fixtures, plumbing, heating) $196,000. *Agricultural Building,* authorized December, 1898, erected 1900; contract cost $152,266.20 (not including $26,428 for plumbing and heating), permanent additions to value of $28,275.30, total cost $180,501.50. *Pumping Station,* authorized and erected 1901; total cost $8,000. *Gymnasium,* authorized May, 1901, erected 1901; cost, with *Laboratory of Applied Mechanics* and *Wood Shop,* $67,342, permanent additions to value of $11,759, total cost $79,101. *Chemical Laboratory,* authorized and built 1902; total cost, with heating and lighting fixtures, $180,000. *Minor Agricultural erections,* 1868-1904, total cost $24,000.

Buildings Erected Under President James, 1904-1916

Woman's Building, authorized June, 1904: contract price (with $6,000 for plumbing and heating) $69,880; addition authorized 1911, erected 1911-12; contract cost $83,936, permanent additions to value

APPENDIX B—*Continued*

BUILDINGS—1868-1916

of $15,030, total cost $190,000. *Agronomy Building,* authorized June, 1904, erected 1905; contract cost, with *Beef Cattle Barns* and *Horticultural Field Laboratory,* $50,500, total cost $59,000. *Entomology Building,* authorized and erected 1905; contract cost $5,000, of which $3,000 from State, $2,000 from agricultural funds, total cost $8,000. *Auditorium,* authorized June, 1905, erected 1908; contract cost $115,961.58 ($20,000 allowed in excess of contract), permanent additions to value of $27,192 (including organ), total cost $143,143.58. *Mechanical Engineering Laboratory,* erected 1905; total cost $36,000. *Farm Mechanics,* authorized April, 1906, erected 1907-11; contract cost $31,082 (not including $2,414 for plumbing and heating), total cost $33,000. *Natural History Building,* authorized July, 1908, erected 1909; contract cost $120,672 ($5,000 beyond contract included), permanent additions to value of $6,650, total cost $245,000. *Physics Building,* authorized July, 1908, erected 1908; contract cost $175,626 (not including $50,000 for fixtures), total cost $225,000. *Ceramics,* authorized November, 1909, erected 1910, occupied 1911; contract cost $40,331, total cost $41,966.85. *Lincoln Hall,* authorized April, 1910, erected 1911; contract cost $221,700 (not including $40,000 for fixtures), total cost $261,700. *Commerce Building,* authorized October, 1910, erected 1912; contract cost $89,980, permanent additions to value of $4,300, total cost $100,000. *New Armory,* authorized June, 1911, erected 1915; contract cost $100,000, total cost $229,119.17, eventual cost $250,000. *Transportation Building,* authorized December, 1911, erected 1912; contract cost $83,250, additions to value of $3,000, total cost $86,250. *Ceramics and Mining Laboratories,* authorized December, 1911, built 1912; contract cost and total cost, including $3,000 for kiln house, $29,019.12. *Locomotive Testing Laboratory,* authorized and built 1912; total cost $25,000. *Stock Pavilion,* authorized January, 1913, built 1913; contract cost $80,000 exclusive of fixtures, total cost $113,000. *Administration Building,* authorized August, 1914, erected 1915; contract cost $110,608, permanent additions to value of $2,673, total cost $154,715 (contract let in combination with *Chemistry Addition*). *Ceramics,* contract let June, 1915, building erected 1915; cost by contract $78,530 (exclusive of $20,318 for heating, plumbing, etc.), total cost $120,880.50. *Vivarium,* authorized June, 1915, erected 1916; contract cost $28,952 (exclusive of $13,031 for plumbing, heating, furnishings, etc.), total cost $55,204.93. *Chemistry Addition,* authorized August, 1915, erected 1916; total cost of building $360,956, furniture and equipment $96,300, cost with old building $540,956. Among minor buildings erected between 1908 and 1915 are the *Genetics Building,* total cost $11,127; *Dairy barns and buildings,* total cost $23,000; *buildings for floriculture, vegetable and plant breeding,* total cost $86,000; *minor agricultural buildings,* total cost $12,000; and the new *Power Plant,* total cost (with mains, etc.) $185,000. The chief buildings under construction since 1916 are the *Women's Residence Hall,* to cost about $150,000 (unfurnished); *Education Building,* to cost about $205,000; and *Smith Memorial Music Building,* to cost, without organ, about $265,000.

APPENDIX C

SUMMARY OF DEGREES, 1915 and 1916.

	1915	1916
Baccalaureate Degrees		
A.B., College of Liberal Arts and Sciences	253	228
B.L., College of Liberal Arts and Sciences	2	..
B.S., College of Liberal Arts and Sciences	35	21
A.B., College of Commerce and Business Administration	..	69
B.S., College of Engineering	195	223
B.S., College of Agriculture	136	189
B. Mus., School of Music	10	7
Total	631	737
Degrees in the Graduate School		
A.M.	69	52
M.S.	48	53
C.E.	3	10
E.E.	3	5
M.E.	1	5
M.Arch.	1	..
E.M.	..	1
Ph.D.	23	33
Total	148	159
Degrees in Law		
LL. B.	19	21
J.D.	2	4
Total	21	25
Degrees in Library Science		
B.L.S.	14	11
Total, Colleges and Schools in Urbana	814	932
Degrees in Medicine		
B.S.	4	12
M.D.	102	109
Total	106	121
Degrees in Dentistry		
D.D.S.	19	32
Degrees in Pharmacy		
Ph.G.	40	39
Ph. C.	4	3
Total	44	42
Total, Departments in Chicago	169	195
TOTAL, ALL DEPARTMENTS	983	1127

APPENDIX D

GROWTH OF AGRICULTURAL COLLEGE AND EXPERIMENT STATION

Year	Federal funds		State appropriations		Faculty	Students registered	Graduating class	Gradnate students
	College	Station	College	Station				
1890-91	$ 5,000	$15,000	.....	.....	3	19	2	..
1891-92	5,000	15,000	.....	.....	3	5	....	2
1892-93	5,000	15,000	.....	.....	3	36	2	..
1893-94	5,000	15,000	.....	.....	3	4	1	2
1894-95	5,000	15,000	.....	.....	3	9	....	..
1895-96	7,000	15,000	.....	.....	3	13	....	..
1896-97	7,000	15,000	.....	.....	6	15	2	..
1897-98	7,000	15,000	.....	.....	8	17	2	..
1898-99	7,000	15,000	.....	.....	9	22	4	..
1899-1900	28,000	15,000	.....	.....	16	87	2	..
1900-01	28,000	15,000	.....	.....	17	150	4	..
1901-02	28,000	15,000	$ 8,000	$ 54,000	23	211	4	..
1902-03	28,000	15,000	8,000	54,000	27	242	9	..
1903-04	28,000	15,000	61,000	85,000	37	291	10	..
1904-05	28,000	15,000	61,000	85,000	37	332	18	..
1905-06	28,500	20,000	61,000	95,000	44	428	24	9
1906-07	28,500	22,000	61,000	95,000	50	445	43	10
1907-08	31,000	24,000	71,000	102,500	61	483	38	17
1908-09	33,500	26,000	71,000	102,500	63	526	54	15
1909-10	36,000	28,000	55,000	138,000	74	628	49	23
1910-11	38,500	30,000	55.000	138,000	74	712	51	28
1911-12	41,000	30,000	*476,150	.....	100	818	68	27
1912-13	41,000	30,000	*476,150	.....	120	879	95	22
1913-14	41,000	30,000	*470,490	.....	137	982	142	33
1914-15	41,000	30,000	*470,490	.....	149	1186	136	51
1915-16	41,000	30,000	*460,615	.....	153	1230	188	75

*Appropriated in one lump sum after 1911 for college and station.

APPENDIX E

ENTRANCE REQUIREMENTS, 1904-1916

	Units required for admission											
	1904 1905	1905 1906	1906 1907	1907 1908	1908 1909	1909 1910	1910 1911	1911 1912	1912 1913	1913 1914	1914 1915	1915 1916
Literature, Arts, and Science	13½	14	14	14	15	15	15	15	15	15	15	15
Engineering	13½	14	14	14	15	15	15	15	15	15	15	15
Agriculture	13½	14	14	14	15	15	15	15	15	15	15	15
Music	13½	14	14	14	15	15	15	15	15	15	15	15
Law	13½	14	14	14	15	15	15	*	*	*	*	*
Library	xx	xx	xx	xx	xx	xx	xx	‡	‡	‡	‡	‡
Medicine	13½	14	14	14	15	15	15	15	15	*	§	§
Dentistry	**1	**2	**4	**4	††	15	15	15	15	15	15	15
Pharmacy—												
Ph.G	‡‡	††	††	**1	**1	**1	**1	**1	**1	**1	**2	**2
Ph.C	.....	...	....	.....	15	15	15	15	15	15	15	15

* One year college.
† Ninety-eight hours college credits.
‡ Bachelor's degree.
§ Two years college.
** Years of high school.
†† Accredited high school.
‡‡ Grammar school.
xx Three years college.

Since September 1, 1916, the School of Pharmacy, the last to require full accredited high school preparation for admission, has exacted the usual fifteen units for the course leading to the degree of Ph.G.

APPENDIX F

TYPICAL OPINIONS OF "RURAL" IN THE CHICAGO *TRIBUNE*, 1867-1869

[These are included as representing a widely shared and important point of view at the time.]

January 26, 1867. "It is nearly five years since the grant was made by Congress, and it is to be hoped that the present General Assembly will locate the University and put 'at least one college' in active operation without delay. We need the school and we need the experimental farm, where, at the expense of the State, and under the supervision of some of our best cultivators, we may be able to test new implements, new seeds, new modes of culture, and to examine more carefully many of the old ones."

January 18, 1868. "It occurred to me that a few . . . lessons on our varied industries during one or two weeks of the winter months by practical men before an audience of the people of our Industrial University at Champaign would be a better employment of the people's money than to have the Regent at New York purchasing an old collection of secesh fossils called a cabinet."

July 28, 1868. [Speaking of a trial in reaping and mowing.] "The trial was on the Industrial University Farm, and yet neither the Regent nor any of the professors thought it of sufficient interest to be in attendance. In this the people were disappointed, for, aided by the 'sciences relating to agriculture and mechanics,' more accurate results might have been attained and many vexed questions permanently settled."

August 15, 1868. "From all parts of the State there comes up a demand that this school shall aid the industries and let the professors take care of themselves. The broken promises of the last term may be forgotten if the people see a desire to attend to the work for which this school was especially designed. We have an experiment in our midst in regard to Texas cattle and the Spanish fever. Had we a professor of veterinary science he might be able to shed some light on the disease, or at least to allay public excitement, to ward off public danger, and to keep people within the bounds of the law. But neither the professor of languages, of English literature, of chemistry, of natural philosophy, of mathematics, or rhetoric, can be of much use in this case. We must have a matter of fact, a scientific and practical knowledge of animal diseases. We have plenty of schools to which to send our sons and daughters for a polished education, but none that is exclusively designed, like this, to teach them the business of life in which they are engaged."

August 26, 1868. "Very wisely has our State prohibited our Industrial University from the granting of degrees. She only awards certificates of progress in those studies that underlie her industries. We are thankful that our State law never contemplated a manual labor school, where, like Michigan, it might turn out a dozen or two farm apprentices instead of teaching hundreds of the sons of labor those sciences relating to the industries that shall give our State a proud preëminence among the States of the Northwest."

September 30, 1868. "An almost daily visit for the past two weeks to the school has convinced me that it has now entered on a career of usefulness that will be gratifying to the people of the State. The errors of the beginning are rapidly disappearing."

November 4, 1868. "The institution presents a singular anomaly —a school for the industries in the hands of the so-called learned professions. How long agriculture may have to struggle for its rights is yet to be decided, but it appears to me that the time may be at hand when theorists and dreamy philosophers will no longer give direction to the education of those who create the wealth of the State and furnish the sinews of commerce."

APPENDIX F—*Continued*

May 14, 1869. "The Committee on Faculty and Course of Study meet in Chicago on the 17th. It is to be hoped that the committee will read the law organizing the University and see if a course of study and term of school cannot be constructed so as to meet its requirements. After we have educated farmers and mechanics in the sciences relating to these industries, we can then fit all who wish to become Presidents, Congressmen, and office-holders at our leisure. At present the demand is for skilled labor."

June 18, 1869. "We complain that the Trustees put at the head of our Agricultural College a mere speech-maker, a man ignorant of agricultural practise and science."

APPENDIX G

SALARIES[1]

Salary	President, vice-president, deans, professors, associate professors, assistant professors			Associates, instructors, assistants		
	1903-4	1913-14	1915-16	1903-4	1913-14	1915-16[1]
Over $6,000....	1	2	2	....	....	....
6,000.....	....	2	3	....	....	....
5,500.....	....	....	6a	....	....	....
5,000.....	....	19	17	....	....	....
4,500..... ...	....	1	3	....	....	....
4,000.....	....	10	12	....	....	....
3,800.....	....	....	1	....	....	....
3,500 to 3,750..	....	31	31a?	....	2	....
3,000 to 3,300..	3	33	33a	....	....	4
2,600 to 2,900..	4	15	20	....	....	2
2,250 to 2,500..	12	36	24	....	5	6
2,000 to 2,200..	26	25	27	....	21	33
1,500 to 1,900..	23	12	....	1	94	116
1,401 to 1,499..	....	....	.. .	....	....	1
1,200 to 1,400..	12	....	....	9	79	121
1,101 to 1,199..	....	....	....	....	....	....
1,000 to 1,100..	4b	7b	....	27	55	61
Less than 1,000	107b	74b	....	123	237	112
Without salary	....	....	53	....	....	72
Total.....	192	267	232	160	493	528

a—1 on leave of absence on half salary.
?—1 Emeritus on ½ salary.
b—These gave instructions on "part time" in the colleges of medicine and dentistry and the school of pharmacy.

[1] This table does not include part-time professors, instructors, etc., or secretaries, clerks, etc., teaching in 1915-16, of which there was a total of 258. For 1915-16 there were 218 graduates, research and student assistants, fellows and scholars receiving less than $1,000, and 5 without salary.

APPENDIX H

ENROLLMENT IN COLLEGE OF ENGINEERING[1]

Year	Men	Women	Total
1903–04	782	4	786
1904–05	853	10	863
1905–06	955	8	963
1906–07	1,092	5	1,097
1907–08	1,180	5	1,185
1908–09	1,245	5	1,250
1909–10	1,297	6	1,303
1910–11	1,274	..	1,274
1911–12	1,288	2	1,290
1912–13	1,159	1	1,160
1913–14	1,200	2	1,202
1914–15	1,187	4	1,191
1915–16	1,211	4	1,215

[1] The attendance of students at the college of engineering, which persistently decreased from 1910 to 1913, has showed an increase during 1913–14 and 1915–16, although without the addition in 1915–16 of a new group of 65 students in the department of ceramic engineering, then included in the college, there would have been an actual decline again. It is difficult to determine what the future will be with reference to attendance. However, it is probable that the point of minimum enrollment has been reached. Attendance has decreased in other engineering schools; and at Illinois it appears that the broadening of general university work is attracting students to other fields who would otherwise have entered the college. The influence of the new college of commerce and business administration is especially strong. But the demands of the engineering profession will probably reassert themselves.

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